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Background Paper 26

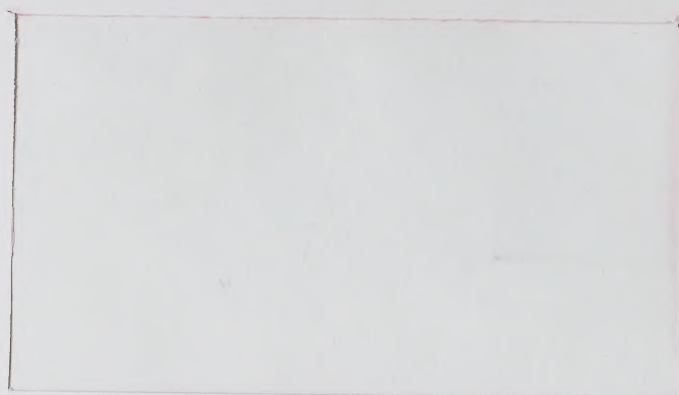
**POLICY REFLECTIONS ON SKILLS  
DEVELOPMENT LEAVE**

John Kettle and Marc Zwelling

**Skill  
Development  
Leave Task  
Force**

**Background  
Paper**







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**POLICY REFLECTIONS ON SKILLS  
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**John Kettle and Marc Zwelling**

**John Kettle Inc. and Vector  
Public Education Inc.**

**April 1983**

This is one in a series of background papers prepared for the Task Force on Skill Development Leave. The opinions expressed are those of the author(s) and do not necessarily reflect the views of the Task Force or the Department of Employment and Immigration.



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## Introduction and overview

This report compiles original research and data collected from the experience of the authors and from Canadian data bases assisted by computer models developed by John Kettle.

Previous research was updated and re-evaluated. The "cases" that reflect on models for massive re-training are built from extensive interviews with leaders in the issues involved.

What the authors have attempted to achieve is not a mere "critique" but a lens through which to evaluate tentative recommendations and proposals about directions for government policy to promote skills development as a response to anticipated needs and supplies or as a contribution to ameliorating the chronic unemployment problems of the country.

The report is therefore written in anticipation of some recommendations that previously have been promoted in this country and others. It attempts therefore to look backward to test the efficacy of some standard suggestions and to look forward to design equations that measure or evaluate the demands, costs and other factors in building a training or re-training system that will accommodate the expectations and demands of its "users" and its creators.

The study contains four parts. One section considers the potential "demand" for training. Another explores as a "case" the experience of the Canadian nursing profession, where training has been used extensively and traditionally to meet expected needs and to respond to criteria such as competence for certification purposes and public trust. Another section deals with the printing industry, traditionally one of the more rapidly changing labour-intensive sectors where tech-

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nology and market forces have confronted management and labour and provoked unique responses to the issues addressed by the mandate of the Skills Leave Development Task Force.

Finally a section is devoted to an alternative "scenario." As futurists we have learned to use imagination guided by data that stand the test of rigorous analysis and objectivity to present visions that serve as policy guideposts. This last section challenges assumptions about the re-training or skills-improvement "model" and serves to offer a serviceable evaluation of potential recommendations about skills development in the emerging labour market of the coming 10-20 years.

We therefore make no recommendations, for that is outside our assignment. We are summarizing, reviewing, discovering and commenting from the perspective of research and experience, attempting to scan environments outside Canada as well to complement our combined 35 years of work for various clients in a variety of jobs and tasks observing the Canadian labour market and its components.

### 1. Demand for skills training

Researchers and policy-makers or analysts tend to observe only one of the two critical "markets" in Canadian society. They focus on the "producers" or the "business" or "capital" markets and neglect or treat superficially the labour market. In the labour market are the "consumers," whose "demands" influence the "supply" of investment or capital in the business market.



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Consequently, most investigations of the question of skills or training required to fill potential or current job openings has focused on the "supply" of potential job-fillers or trainees. We think more emphasis should be placed on the "demand" side, that is, on the labour market itself, considering (in marketing terms) the size of the market and the tastes of the consumers. Looking at labour markets and training this way compels us to ask different questions and therefore find new answers. How many workers (or ex-workers) will be expelled from their current jobs in the years ahead and what would an inventory of their "old" skills show about them? Would it be helpful to ask not what new skills they need but what can be discovered for their "old" skills to do?

Focusing on the question this way opens the area of conversion of industries instead of conversion of people. This is no theoretical or rhetorical inquiry. Vast sums of money are required to train -- equal often to the cost of adapting the old stock of equipment or plant to the needs or "demands" of the current labour market inhabitants. Since training is but one of the approaches society could take toward a "solution," its costs should be gauged as precisely as possible so the results of such a choice can be evaluated or weighed (or in the case of our scenario, guessed logically and intelligently).

The major "actors" in the labour market such as unions and employer groups focus their guessing or prognosticating about future trends on the supply of labour, not demands. It is generally government (through the Canadian Occupational Projection System, for instance, in Employment and Immigration Canada) that forecast future job openings and skill "shortages."

In part this response results naturally from the distinction

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between finding work and making work. A society influenced by affection for capital and technology (instead of say, the requirements of labour or a more "humanistic" direction) looks to fit people into the slots of the economy. This is not related as a value judgement or criticism but as an analysis of the difficult choices confronting policy-makers, politicians, leaders or researchers in any field or sector touched potentially by the issues involved in assigning proper shares of scarce resources to competing but equally compelling and attractive needs and demands.

For example, typical of a union approach to that has nearly universal scope would be the results of a survey of affiliates of the International Federation of Chemical, Energy and General Workers' Unions, headquartered in Geneva, Switzerland. This "family" of unions asked its affiliates in the pulp and paper industry in 11 countries to forecast employment in that sector to the year 1990. Only 1 of 11 unions anticipated as many employees working in wood products in 1990 as worked in those industries in 1970. The exception to the anticipated decline of employment was Sri Lanka.<sup>1</sup>

In the words of the researchers, developing countries such as Sri Lanka "while contributing to higher rates of consumption. . . are liable to become increasingly self-sufficient and so displace imports previously made from the development countries, which are already undergoing a capacity squeeze."<sup>2</sup>

<sup>1</sup>Pulp and Paper Industries Bulletin, I.C.E.F., Summer, 1982, pp.12-13.

<sup>2</sup>Ibid.



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The researchers note that "main objective" of the unions is "to maintain employment or to lessen the blows when technological redundancy becomes inevitable."

The unions' key demands, however, center not on training but on disincentives to work: reduction of working time, reduction of overtime, early retirement and elimination of continuous shift work. The most popular response is to press for earlier retirement, with ages 60 and 62 the targets. The I.C.E.F. affiliates "place a high value on retraining for displaced workers. . ." but their behaviour emphasizes other responses.

A cautionary note about the value the labour market places on training or skills development has been expressed by a major U.S. labour organization, the American Federation of Labour-Congress of Industrial Organizations. Commenting that barely 3% of employees whose collective agreements provide for reimbursement of college tuition by their employer actually take advantage of reimbursement, the AFL-CIO notes that employers and employees can have a conflict of interests in skills development. "The employee usually has to learn something that will be helpful to the company if (the employers) are going to pay for it, but at the same time the employee should be learning something that could help him to get another job if necessary."<sup>3</sup>

There will obviously be less enthusiasm for supporting skills development through apprenticeship or educational leave if the result is

<sup>3</sup> Silicon Satellites and Robots, The impacts of technological change on the workplace, Department for Professional Employees, AFL-CIO, 1979, pp. 44-45

to increase the turnover and "labour problems" of the current employer.

Another observer has found that an emphasis on training and the massive allotment of resources required to facilitate a transition in one industry or part of the national economy could compete with other economic objectives or government and private sector policies. The International Metalworkers Federation, for instance, has watched the spreading micro-electronics revolution for nearly a decade and discovered two ways jobs can be made redundant in the "high-tech" industry. First jobs can be lost in the vertical concentration of producers of semi-conductors; then more jobs can be lost as through the substitution of micro-electronic parts are substituted for mechanical or electro-mechanical contents. "Vertical or forward integration," whereby makers of integrated circuits expand their product line to finished products such as radios or video games, can be restrained by training programs, says the IMF, if skills development opportunities are used by the producers of finished products to up-grade the skills of their workers in a program of "backward integration," the manufacturers producing their own semiconductors or "chips."<sup>4</sup>

For the I.M.F., as well as for the I.C.E.F., training seems less attractive as an "investment" or response than dividing a shrinking "pie" of work more equitably. "Different flexible types of employment, such as part-time jobs, job sharing, reduction of the working life span can and must be accepted and introduced as alternatives to high unemploy-

<sup>4</sup>Microelectronics and Employment, I.M.F., Geneva, 1982, p. 23.



ment rates," says the labour federation. There is little profit, it says, in counting lost jobs or estimating "endangered" jobs.

For the I.M.F. the kind of re-training or new skill development required is not work skills but (to paraphrase) leisure skills. The considerable increase of productivity possible through computer-aided work may mean "a personal crisis for one individual who believes in the capitalist work ethic and values work highly. The major quantitative impact on jobs will be a short-term increase in demand for highly-qualified workers that "will recede with the increasing use of new technology."

What kind of skills and new job specifications are forecast?  
". . . Increased demand for. . . abstract thinking. . . planning, creativity, communication and team work."<sup>5</sup>

If this turns out to be true it is a far different attitude toward job training than the existing providers of educational services cherish. It is possible that the reactions listed above address a despondency that leaders in the employment sector feel about the sheer enormity of the task of re-training senior workers expelled from old jobs or the nearly incomprehensible difficulty in casting "safety nets" widely enough to ensure that millions do not fall through into poverty, anomie and hostility.

A study of companies using micro-processor-based tools in manufacturing found that the required skill levels rose among managers

<sup>5</sup>Ibid., p. 29.

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but not among subordinates. Since there are so many more of the latter the problem of re-training takes on ominous dimensions. "Estimates of job loss in blue-collar jobs range as high as 30% over the next 25 years," one business journalist wrote in 1981. "The polarization of factory jobs could arise in part from the fact that top managers could probably adjust to necessary changes brought about by technology, while the lowest-level workers would not need to. Middle-level workers would have the greatest difficulty in adapting their skills."<sup>6</sup>

The matter of expectations arises constantly wherever in the world there is reflection or commentary on the changing character of once heavily industrialized civilizations. A sense of the hopes pinned on education and the costs associated with a "training-driven solution" can be obtained in the policy statement on paid educational leave approved by the 1976 Canadian Labour Congress convention.

It states:

As the country as a whole will benefit, the country as a whole must be prepared to accept the economic task on a more equitable basis than in the past . . . a national system of paid educational leave must be implemented. Only through a programme of paid leave can we guarantee equal access to education, and thus jobs and full community participation for all of Canada's workforce.  
(Emphasis added.)

The Congress's goal is a "system of recurrent education allowing for self development job training and upgrading without leaving the labour force permanently." Legislation is called for to allow all

<sup>6</sup>"Catching up with the Computer Revolution" Harvard Business Review, by Lynn Salerno, November-December, 1981, pp. 10-12



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employees access to "all forms and levels of education at their own discretion." The funding "must come from two major sources: governments, which have a clear responsibility to the workers of Canada, and employers, who reap the greatest benefits from the maintenance of an educated society."

For the policy-maker or analyst trying to discern "what the people want" the task is more difficult because of lack of quantification or proof of "results" from the various visions and policies promoted by the labour market. The search for consensus is frustrating. Is the C.L.C. vision stated above in conflict or consonance with the views of editorial writer for the Communications Workers of Canada, who said, "The present 40-hour week makes no sense today. It even makes less sense to have people forced to work overtime. It is time the attainment of the 32-hour week, with the same pay become a priority for the labour movement in Canada. It should in fact be legislated. That would be real progress."<sup>7</sup>

Without a common "language" to understand what will happen to work, what the cost of alternatives to work will be, (paid education leave and training or re-training being only two such alternatives), and without precise understanding of how people will react to initiatives to share or reduce work or to "manage" a transition from old to new work, or from declining to growing sectors, the labour market's members, employers, personnel officials and government decision-makers face a complex route with no easy-to-read maps.

<sup>7</sup>"In the name of Progress," C.W.C. News, No. 2, Vol. 3, March-April 1983, p. 2.

It is easier to be sure employers will offer jobs that require certain skills than to make sure that potential employees will accept those jobs and conditions and submit to training that amounts to virtual programming of their lives to accommodate themselves to the needs of the labour market as defined by the bidders. Employers themselves are often poor estimators of their own needs until it is too late. Individual employers can confuse or disguise their own training or skill demands through the practice of "labour hoarding." Hoarding reflects the competition between employers for trained workers with certain qualifications especially at times of shortages or specific skills. Employers conserve their skilled people by using them in different tasks rather than risk losing employees and then have to recruit replacements or engage in competitive wage bidding "auctions" with other employers for the talent.

This phenonemon can puzzle and confound government regulators and labour market researchers. The relationships between events that appear casual or insignificant sometimes can be substantial as the Economic Council of Canada reported in the council's massive study of transportation regulation. Reviewing the impact of regulation, the council said its "most significant conclusion" is that the Ontario trucking market is "susceptible to destructive competition. . . . if it is deregulated without a great deal of skill and care. . . . In Ontario we appear to have many potential components of destructive competition."

One of the "many potential components of destructive competition" discovered by the council researchers is excess labour. "Almost every firm we interviewed has trained drivers serving as dock hands while



waiting for truck(s)." Operating policies of individual employers can complicate or defeat government policies intended to facilitate a "transition" to another form of employment or can impede the desired outcome of well-intentioned initiatives to enhance skills and make labour more "competitive." As the council noted, "If management decides that in order to maintain experienced drivers it is willing to pay them to perform maintenance, or to sell or undertake other duties during slow months, driver costs can become fixed."<sup>8</sup> The implication is that skills development opportunities can compete with the security (false or real) that employees feel in leaving things "pretty much as they are." It is crucial in determining what will drive or restrain skills development to measure which policies are "carrots" and which are "sticks" and which will be more effective.

Skills development will have to address the needs therefore of employers and for the narrow benefit of one interest versus the other, if skills development programs are to be successful and contribute to broad public policy criteria. Resolving this conflict will demand more than good faith or intentions. The Communications Workers of America recently completed the first phase of its "Committee on the Future," project and noted that workers will not be interested in training for their own ambitions, not training that commits them to one sector or employer.

Career-minded workers are likely to be more committed to their own interests than to those of their employers. They will want to acquire "portable job skills" that<sup>9</sup> they can take with them from employer to employer.

<sup>8</sup> Working Paper No. 3, Studies of Trucking Regulation" Vol. 11, Economic Council of Canada, August, 1980, pp. 302-304.

<sup>9</sup> Committee on the Future Report, Communications Workers of America, Washington, D.C., U.S.A., March, 1983, p. 63.

For the Communications Workers of America the keys to successful training or re-training programs involve portability of benefits between employers, pay scales based on "comparable" worth between the sexes, "out-placement" preparation for members who are displaced, and "capabilities for analyzing and forecasting short-term local labour-market trends, and to do job-matching. . . . probably supported by a national job and skill-forecasting program."<sup>10</sup> The union's basic goal, according to the committee on the future, should be providing "employment security," not job security, for its members.

## 2. Case: the printing industry

If a model were constructed by "stakeholders" to deal with the unemployment-training-skills-shortages quandary, it would probably need to satisfy to some degree all of the following criteria for success: maintenance of income for jobless workers, notification of changes in work force levels, protection of benefits and other extrinsic values of the jobs, reliability of supply of labour to the employer, reasonable costs without public subsidization, encouragement of efficiency in the sector or industry (so that the "clients" management and workers, do not become orphans or wards of the state, "losers" who require propping up at considerable taxpayer expense).

Beyond those practical considerations, ideally, the model would satisfy philosophical interests in being "for the benefit of all parties," would be in keeping with Canadian values or traditions regarding the importance of work and the legitimacy of interests on the side of owners, managers and employees, and to the greatest extent possible would

<sup>10</sup>C.W.C., Op. cit., p. 71.



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be managed jointly with shared responsibility for all phases of the program.

All these criteria are met in the printing industry, though not in all sectors, firms or trades. The work force continues to decrease, but there are strong signs that the way in which "down-sizing" occurs is satisfactory to those with the greatest interests at risk from the transition. Productivity is good, driven by technology, corporate mergers and other re-alignments, and by training. The representatives of the employers and employees in one part of the industry, the Graphics Arts Industries Association, and the Graphics Arts International Union, manage the Canadian Graphic Arts Institute, with a bi-partite board of directors drawn from labour and management. The institute has six schools in Canada (in Hamilton, Ottawa, London, Ont., Toronto, Vancouver and Quebec, with another planned for Winnipeg).

According to assistant director Barry Thom, the industry anticipates that workers will be an adult working life span. Apprenticeships are two-year programs, available to new employees. Journeymen (experienced employees) can also take courses. Average enrolment is 65 for apprenticeships. The program is funded by the employers and unions. There are "winners" among traditional adversaries on both sides. "Employers realize there's a real value to this," says president Alan Wheatcroft of Local 211 of the Graphic Arts International Union in Toronto.

Unemployment, according to Mr. Thom, is 5%-8% in the industry but without the deeply depressed state of the economy since 1981 would be the natural 5%-1%. The union's membership meanwhile has grown in Canada since the late 1970s from 8,500 to about 14,000. The total cost

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of the training and re-training programs in 1982 for 1,420 men and women was \$3,109,730.

The key instrument, however, in managing unemployment in the industry and keeping the workforce trained, productive and on the job has been "a gentlemen's agreement about attrition," says Dan Ryan, national manpower services co-ordinator of the Graphic Arts Industries Association. The existence of union seniority clauses designed to protect the longer contribution and "investment" in their job of older employees, has not been a major bottleneck in graphics arts or other segments of the business.

There is an understanding, in the words of president Bill Hall of Local 10 of the International Printing and Graphic Communications Union (the "pressmen") that "it's a young man's game." The need for re-training older workers being displaced by technology is "desperate," says Hall. But nothing comparable to the Graphics Arts Association plan is available in the commercial printing business for printing press operators. Presses that once required 16 employees now are operated by 6. Rather than invest in training to retain senior workers or to nourish younger ones, employers compete with one another for help to run presses when there are openings, says Hall.

A 25-cent-an-hour training fund contributed by the employers is not seen as an answer since few courses are available, says Hall. Nonetheless, the general principle in the pressmen's union as in the graphics arts union, is that workers have opted to divert a portion of their pay to provide training for themselves and for new employees -- provided the training is available near the place of work, is in the same industry, and builds on existing skills that are developed or "renovated" for



new equipment and needs in the same industry or trade. Douglas Scott, president of Southam Printing Inc. and chairman of the joint advisory committee on the printing industry for Toronto's George Brown College, points to the lack of training for certain crafts, the bottleneck of union seniority clauses and the unwillingness of senior workers to re-train even when courses are available. The response from management to that situation is "the golden handshake," with senior workers enticed out of the workplace with generous disincentives to work. The graphic arts union also supports the "golden handshake" for older workers who decline training, with supplementary unemployment benefits to "top up" Unemployment Insurance, and with early retirement provisions that provide pensions below the "normal" age of 65.

Employer views are often articulated less concisely than those of the workers and their unions. This report, dealing with the practical realities of two contrasting "models" of skills development and the potential of that approach to large-scale problems of mismatch and cohesion in the labour market. The report would be of little importance if it seemed biased or reflected only the "worker's eye view" of the labour market. Therefore two "cases" where there appears to be substantial agreement between all "stakeholders" are being investigated. One of the printing industries, reflects a measure of all responses to the challenges of technological change, productivity, free-market forces, unemployment and training, or income security. The printing sector is typically an industry of many small shops, much like Canada as a whole. The success or failure of the printing industry's response to the question of skills development therefore encompasses lessons and meaning in

studies or policy recommendations expand or reduce such an approach. The data are sometimes only "impressionistic," since in-depth evaluation of the costs, effectiveness and long-term results are not affordable in a study such as this and have not been done thoroughly in the industry itself or by outside consultants or other researchers or academics. Nonetheless we feel the opinions of those in leadership in the sector are valid since programs that replace or make redundant these current efforts will need the support and participation of the people now in charge of their own responses to skills development demands.

The printing industry presents some joint union-employer plans that use a variety of job and income maintenance techniques at the same time as they upgrade skills to meet the needs of employers for competent staff and the interests of employees for marketable knowledge and qualifications. It is to our knowledge as close as one can come in Canada to a model of an "industry in transition" where the movement of large numbers of people into, through and out of obsolete jobs has occurred.

The transition has not always been easy. Difficult strikes occurred in some situations, particularly in the newspaper business (not as frequently did they occur in the job-printing end of the sector where the primary focus of the enterprises was printing, not as in the case of newspapers where the business was not at its heart printing at all but journalism and advertising).

Other industries have also adapted to the changing technology and demands of their customers, shareholders and workers, in the face of written communication in the printing business, new forms of transportation in the railway business, etc.). But in other sectors, such as rail,



transportation, there appears to be no similar, understandable model accepted by all parties and translatable through massive dislocation of the workers as terminals and branch lines were abandoned. The printing industry has remained in substantially the same place for all time with employment levels showing much more stability than in rail transport. This is not to dismiss efforts in rail or other industries such as construction, telephones, automotive or other sectors where training new employees, re-training older workers and deploying the arsenal of alternatives to work (such as pensions or supplementary unemployment benefits, etc.) have been featured. Our point is that in these other sectors there appears to be less agreement as to the success of the measures taken and less of a codified, understandable description of the process. We stress this last point because skills development or any other response to labour market imbalances needs to be easy-to-understand, supported by those most intimately involved, and sustainable without resort to comprehensive, indefinite government intervention.

Finally there should be enthusiasm from the "partners" in the program. We have seen little such enthusiasm on as wide-spread a basis in other sectors nor have we observed the same intensity of confidence in the results in other sectors. (Construction employees and employers engage in continual re-negotiation of the terms of apprenticeships, government intervention is substantial but routinely criticized by labour and management, and finally the workers themselves complain of the lack of work even with expensive credentials gained at great expense and time.

Few models in other countries appear readily transportable to Canada. A resume of some efforts shows the pitfalls in trying to copy foreign examples piecemeal. Each is indigenous to the country and would probably resist transplanting.

Sweden: The transition out of ship-building involved exporting thousands of workers from shipyards to new jobs, achieved with re-training and job assurances and helped immensely by the expansion of the welfare state. Laid-off ship-builders were employed near their homes in services, especially in hospitals. One advantage in Sweden lacking in Canada is a more uniform pay scale with few steps or increments between job classifications and therefore comparatively tiny gaps in pay between skilled blue-collar work and public sector or service sector employment. In Canada, the opposite is true, with vast gaps (\$2-\$4 an hour) between employees at the bottom of job scales and those with more skills at the top. Vast pay gaps exist between the "manufacturing" sectors which serves to impede the transfer of workers from blue-collar jobs to services. Thus previously skilled or semi-skilled employees facing redundancy have little incentive to train for jobs in entirely new sectors where the wages for hospital labour, for example, represent steep pay cuts. Such transitions are therefore easier to achieve if the pay scales are flatter. There is little prospect without permanent pay controls in Canada of flattening salary schedules.<sup>11</sup>

Japan: Much has been said and written about the ability of the Japanese to adapt their old industries to newer, world-leading competitors through the co-operation of the central government and business.

<sup>11</sup>From data and interviews in Sweden collected by Mr. Zwelling.



Depending on the perspective of the observer Japan's system seems depressingly paternalistic and patriarchal or wonderfully flexible and humanistic. Textiles present a "success" in Japan where the powerful Ministry of International Trade and Industry (M.I.T.I.) suffocated the industry's capital reservoirs through its connections with Japanese banks, forcing the owners to close less efficient plants making cotton and driving conversion to synthetic fibres, for instance. Workers are pictured hammering their old textile machinery into fragments.<sup>11</sup> The opposing view asserts that "the burden of industrial change in Japan fails . . . on subcontractors, women and retired people, whose economic futures are highly uncertain. Many of the people leave the work force for considerable periods, especially when Japanese industry makes a major shift in production . . . . Others find temporary work in Japan's retail stores, which make intensive use of labour."<sup>12</sup>

Japanese ship-building firms were cartelized by M.I.T.I. and their financial and human resources dispersed to new fields. Whether the results are exportable to Canada or even worthy of imitation is beside the point that Japan exemplifies a "model" of industries successfully managing the transition without massive disruptions or "mismatches" between needs and supplies while meeting national goals in terms of international trade, high employment, productivity and technological superiority.

<sup>11</sup> See Fortune, January, 1983.

<sup>12</sup> "Playing Tag with Japan," by Robert B. Reich, New York Review of Books, June 24, 1982, p. 37.

Federal Republic of Germany: Recent experience in West Germany indicates that successful "transitions" can be expected to occur most easily if it is not from industry to industry (as in the Swedish example, from ship-building to health care), but if the transition (in terms of new jobs and skills development) occurs within a changing industry. This could be a significant criterion for selecting where government policy should focus and where the instruments of intervention (tax policy, investment incentives, training programs, wage subsidies, work disincentives, etc.) should be applied for the most impact.

In the German textile industry small family-owned firms without access to contacts in foreign markets or to substantial capital for new investment abroad (in lower-wage countries) dominated the sector in 1970. Substituting mechanization for labour was tried but failed since the high cost of technology over-ran the savings in reduced payrolls. Some firms re-located within Germany to take advantage of labour savings in some districts with traditional regional disparities and lower pay scales.

Despite their larger treasuries and vaster ranks of managers, planners, financial advisers and marketing experts, the larger textile firms suffered more than the smaller companies.

Small and medium-sized firms survived and thrived, according to a recent study of the industry for the International Labour Organization. The smaller firms generally looked for "market niches in high quality, high fashion segments of the market. . . .," say the authors of the study. While in the entire German textile business 2,322 firms went out of business between 1970 and 1980, total employment in one sub-sector (women's and children's wear) grew 50% between 1960 and 1980.<sup>13</sup>

<sup>13</sup>"Small is beautiful in West German's textile recession," ILO Information, Geneva, Vo. 10, No. 1, February, 1983, p. 5.



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About one-third of all the employees in the textile and clothing sectors in 1970 had lost their jobs by 1979, however.

In part or total in many firms, the Canadian printing industry's counterattack on inefficiency, tougher external economic conditions, competition (in some cases from abroad) and the challenge of updating skills incorporate features of all the responses above. Work disincentives, re-training, and adjustment by the firms to new markets or products have all enabled the industry to cope with change.

The "bottle necks" in the way of simple imitation of these foreign successes for Canadian employers and workers are obvious. The very size of the country may inhibit skill development if the skills are required in other areas. It is difficult to know how much stress to place on venue but the most successful re-training and skills up-dating experiences in Canada seem to have occurred where the training is almost immediately useful in the same workplace or the same locality (as in most construction training, or in the case of the printing industry's training facilities).

The value of training where the workers are and of locating jobs where new skills are found cannot be overstated. Building trades apprenticeships are the model of training for work where you live instead of training for unknown destinations. Its popularity is well-known.

" . . . Apprenticeship is the most nondiscriminatory learning system there is. You don't have to be rich enough to drop out of society for four years to go to college. You don't have to be a genius, and you can continue the development of your own lifestyle while you prepare for a career," says Reese Hammond, director of education of the International Union of Operating Engineers.<sup>14</sup>

<sup>14</sup>Silicon, Satellites and Robots, Op. cit., p. 42.

A major information and service sector organization, the Ontario Public Service Employees' Union, has also underlined the benefit of training at the workplace where the employees are comfortable and familiar with the settings and where re-training seems perhaps more like true "work" than schools and classrooms. O.P.S.E.U.'s policy on technological change states that "contracts must . . . provide re-training, at the employer's time and cost for employees who become redundant." But more than training, the union believes work is and will be even more so in the future a scarce commodity to be hoarded and that "paid educational leave in conjunction with negotiated cuts in the working week/and or increased vacation time will also help cushion the impact of too many people for too little work."<sup>15</sup>

Labour generally sees the larger portion of the work force - - the "typical" or "average" worker, not the already highly educated or qualified individual - - benefitting most from reduced hours instead of increased training. There is a fatalism that output gained equals work lost and that fewer jobs as instruments of distributing income will exist - - so in effect, "why fight it?" As far as skills development goes, white-collar employers have done little training themselves and so their employees have no familiarity of how training would look and feel where they work or under the sponsorship of their employer. Typically white-collar workers at the non-managerial level have no access to training, and office workers' unions have negligible provisions for education of their members in employment skills. Even among more developed labour movements in the white-collar sector such as in Europe (where banking, insurance and

<sup>15</sup>"Presentation on Microelectronic Technology and Jobs to O.P.S.E.U. Board," May, 1981.



other professional and technical sectors are much more highly organized than in Canada, which has no insurance or banking unions) skills development is not seen as contributing substantially to the "bottom line" of the employers or to the security of the worker:

The International Federation of Commercial, Clerical, Professional and Technical Employees says that electronic systems in retailing, banking and other sectors with large clerical work forces "will accelerate the downward trend in employment levels already experienced for a number of years." Unions in Europe are determined to fight employer efforts to "casualize the workforce at the expense of permanent full-time jobs to take full advantage of the new technology," says the general secretary of the commercial and clerical unions' federation, Heribert Maier.<sup>16</sup>

Nevertheless the banking unions, according to this spokesman, expect drastic reductions in staff and in the level of skills and qualifications required to work in the network of branches, where 75% to 85% of bank employees now work. For those who have been "de-skilled" out of jobs it is little comfort perhaps to propose re-training and the development of new skills since people so affected could logically conclude that their new skills will only become redundant again.

Even in industries with traditional emphasis on "in house" training and staff development at all levels, from managerial to entry-level jobs, the encroachment of technology can appear to over-run human qualifications. "De-skilling" through the application of "smart" mechanization permits the employer to de-emphasize training, according to the Telecommunications Workers' Union. While contract language prohibits lay-offs

<sup>16</sup> News release, Geneva, March 31, 1983.

from technological change at B.C. Telephone Co., in the union's view lay-offs caused by the next step -- at arm's length from the installation of the new technology -- result from de-centralization of facilities permitted by the newer equipment. As a result, interior B.C. communities would lose "at least 850 jobs," the union predicted in 1980. Re-location and re-training, while provided in the contract, are unilateral powers of the employer in the union's view and applied "in a highly selective and discriminatory manner," denying the potential benefits of acquiring new skills to many whose jobs are becoming redundant.<sup>17</sup>

The most effective job security strategy in the United Auto Workers would appear to be raising the cost of lay-offs to the employer -- providing disincentives to reduce the work force -- by bargaining increasingly expensive lay-off benefits and providing longer notice of intended shutdowns. "We can no longer expect that reduced work time by itself will offset the amount of jobs being lost due to technological advancement," said the U.A.W. on the eve of 1982 contract talks with the "Big Three" car companies in Canada. "The U.A.W. must insist that our contracts provide that workers' income and employment security not be adversely affected when technological advances and changes are to be introduced in our plants and offices. . . . Training and re-training . . . programs should be employer-financed, and the worker should be paid for such training or re-training."<sup>18</sup>

The Auto Workers seem to consider that there is work to be done

<sup>17</sup>Bulletin Board notice, T.W.U., Burnaby, B.C., April, 1980.

<sup>18</sup>"Goals in '82," Report to the Canadian U.A.W. Collective Bargaining and Legislation Conference, May 8-9, 1982, pp. 51-52.



if employers can be behooved to provide it. " . . . Some employers have created artificial shortages (of skilled workers) by refusing to hire laid-off tradespeople who refuse to sever recall rights to their other plant."<sup>19</sup>

Distinct from all these responses but borrowing in part from them all is the printing industry's bi-partite approach. Its appeal to the policy-maker is that it comes at practically no cost to the public. The money is provided by the employer but negotiated, thus it is diverted from compensation or other forms of "labour costs." Its appeal as well might be that it has "stood the test of time." The lack of a model of a sector or society in transition is a serious obstacle to new schemes that offer the promise of more income or job security. Is it in microcosm that the Canadian economy or large parts of it (say in manufacturing) could do?

Who remembers what the transition looked like from a primarily rural to a predominately industrial economy (measured by the gross national product composed of each major sector -- agriculture, industry, services) at the turn of the century? How did the country "manage" the transition in 1950 when for the first time the portion of G.N.P. devised from goods dropped below that generated by the value of services?

Most commentators expect the transition this time to be rugged, perhaps recalling vicariously or through the literature of the time the sweatshops that inhaled farm families after the industrial revolution. Many agree that the change will be marked by bounding productivity gains

<sup>19</sup>"Goals in '32," Op. Cit., p. 60.

(as the exodus from farms to factories generated steadily growing national productivity). The Public Service Alliance of Canada says it should "continue efforts to reduce working hours and to increase paid leave as a means of sharing in the increased productivity resulting from office automation." The union, the country's largest office workers' organization, also wants "adequate training and career development" for employees affected by technological change, but stresses that "an alternative to a reduced labour force is a better distribution of available work."

The union puts little faith in additional training to solve the problems of its members (as opposed to the problems of government managers). Data processing technology wiped out 4,500 jobs between 1974 and 1980, in the federal government, according to the union, while creating 2,014. ". . . For each position created by the new technology in the administrative support field, more than two positions have been eliminated."<sup>20</sup>

Statistics on pay and employment levels would lend weight to the observation of one union official who recently commented that the larger "deal" or contract has, in broad strokes, meant ". . . labour in Canada has usually been willing to trade off employment for higher wages in dealing with past waves of technology. . . ."<sup>21</sup>

But his pessimism about the training option as a weapon in labour's interests is evident, and he adds, "We are not given much

<sup>20</sup>"Technological Change - Office Automation," Policy Paper, 1982.

<sup>21</sup>Speech by Ray Hainsworth, education director, Ontario Federation of Labour June 16, 1982.



encouragement by the dismal failure of government and industry to do an adequate job in the traditional areas of training let alone to take on the massive training job that will be required by new jobs and indeed new industries."

These attitudes present an obstacle to planners and policy-designers. If it is the deeply felt experience that workers must struggle for their share of training as well as for wages, then access to skills development will become another feature of the adversarial Canadian labour market, along with incomes, jobs, retirement security and other extrinsic values of work on the list of negotiable demands. The printing industry model with its emphasis on a range of responses may be a guide post toward the invention of skills development systems that work simultaneously in the service of all stakeholders because such a system is close to their own experience, paid from their own resources and controlled by representatives whose trust and legitimacy is not questioned.

### 3. Case: nursing and training

Nowhere perhaps in the economy has skills development been as available to as many people -- regardless of prerequisite education, for example -- as in nursing. The barriers to women entering the profession -- so recently lowered in business administration, law, medicine, engineering and other fields -- have never been know in nursing. It was on the other hand always "women's work." Yet it held status, certification and perhaps more than normal security as well as better than average pay (compared with comparable fields dominated by female workers).

Training has historically been the route into the job in nursing. Training has also been the major "lever" to bring supply and demand into rough balance, as practitioners and experts told us in the preparation of this study.<sup>23</sup> Furthermore, the nursing profession is a useful model for studying the impact of skills development on labour shortages and demands since the great portion of the cost of training has been traditionally paid by the state through the public education system. It has never been questioned that to train as a nurse one would attend a publicly-supported institution. Although they pay tuition like other students, the institutions where they learn (classrooms or hospitals) are heavily subsidized.

Therefore as a "model" of the skills development "solution" the nursing experience is valuable. Actual costs and benefits could not be measured within the scope of this research. But a general or

<sup>23</sup> More than 20 interviews were conducted for this part of the study.



"impressionistic" sense of how the system is working can provide useful insights for the policy-makers, health field managers, or nursing professionals.

As an example, the profession presents the researcher with a nearly overwhelming amount of perceptions -- many of them contradictory. It would be difficult to answer comprehensively whether the cost of training and skills was apportioned fairly or effectively. But the field has been noted for short-term planning and no general agreement on results of the past or directions for the future.

The "signals" given to potential new entrants to the field are mixed and change frequently -- often with a year or less in the same region. Surpluses of years ago became shortages only recently, and now are apparently surpluses again. Many people know a Canadian nurse in the United States who departed in the 1960s or 1970s to "greener pastures," especially to more lucrative jobs.

The causes for the shortages (or surpluses) that occur regularly in nursing are not understood and could depend on a multitude of variables: births, pay, working conditions, the general economy, lack of advanced training, government health policies.

And yet the profession would appear to be almost unique in that it is virtually free of pressures that could result in sudden shortages or surpluses of experienced labour that affect the printing industry, for instance, or other sectors. The demand for nursing is related to the demand for health services, which could be expected to be fairly uniform despite the "health" of the economy. A strong supply of workers in the health field would appear to provide health administrators with a vast

pool of potential candidates to fill shortages (via training of semi-skilled health care workers who wish to up-grade into nursing from non-medical occupations).

Yet nursing is a "problem" in the occupational picture. As recently as March, 1980, Manitoba had a "serious shortage" of nurses (151 vacancies in Winnipeg alone), according to one observer,<sup>24</sup> while another official viewed the same circumstances and declared talk of shortages as "extravagant hyperbole."<sup>25</sup>

Surpluses and shortages have developed quickly in Canadian nursing and are not just a case of different perceptions (as the example just cited from Manitoba might indicate). In Saskatchewan an 8% "vacancy rate" in 1980 became a 1% rate in 1983, according to the Saskatchewan Association of Registered Nurses. The difference is 320 openings three years ago and 40 today.

Despite assurances that there is no shortage in Ontario in 1983, Humber College of Applied Arts and Technology in Toronto reported 2,000 applications for 130 places in its nursing program while one major hospital, with 100 vacancies, was recruiting in England for nurses.<sup>26</sup>

Debate on the subject in the political arena entails some blaming. One Ontario cabinet minister noted that 25,000 nurses "could be recruited for part-time work" if hospitals were more "flexible" in terms of hours of work arrangements.<sup>27</sup>

<sup>24</sup>Manitoba Hansard, Wilson Parasiuk, MLA, March 25, 1980, p. 1578.

<sup>25</sup>Ibid., p. 1579, Hon. Bud Sherman, minister of health.

<sup>26</sup>Ontario Hansard, May 11, 1982, Tony Grande, MPP, p. 1153-1154.

<sup>27</sup>Ibid., p. 1154, Hon. Bette Stephenson, minister of education colleges and universities.



The nursing profession's overwhelmingly female character (nearly 100% female in most provinces) indicates that severe shortages could in the future develop quickly. Practitioners believe this is so because more job opportunities are becoming available to women in non-traditional fields. Some public policy advisers counsel that preparing women for more security in the labour market requires eliminating vocational sex segregation. "... If the existing job segregation is to be overcome," says the International Labour Organization, "remedial action should start in schools where girls must be influenced to participate more fully in technical subjects that will give them the analytical abilities required for promising jobs in the future."<sup>28</sup> Surely nursing, too, could be considered a promising job for the future. Yet the potential for shortages resulting from other factors remains. The population of potential nurses is declining due to the dropping birth rate. The American Nurses' Association says "nursing has to work harder to attract young women today."<sup>29</sup>

Nursing in Canada provides an insight into the usefulness of skills development leave because some aspects of such leave already exist. Perhaps not surprisingly, however, they are seen as improving the job security and quality of nursing and are rarely seen as responses to the potential mismatches between vacancies or skills shortages and the supply of nurses in the job market. Typical of the comments on the value of skills development leave are those of the Manitoba Association of Registered Nurses:

<sup>28</sup>"Why be afraid of tiny chips?" ILO Information, Op. cit., p. 8.

<sup>29</sup>"Nursing Finds New Recruits," New York Times, Supplement, Mar. 6, 1983, p. 9

Professional nursing associations have from the outset understood the importance of education as an instrument for advancing the professional person.<sup>30</sup>

Nurses have responded to their own demands for continuing education in a variety of ways, often supported by their employers through reimbursement of tuition, unpaid leaves of various lengths (from weeks to a year, and infrequently open-ended leave at the discretion of the hospital or health agency). Some institutions provide paid leave for short courses (occasionally up to a week) for continuing education for nurses. Nonetheless the demand for more training across the country is strong among nurses. There are a number of suggestions that would facilitate skills development in nursing, including tax breaks to enable nurses to deduct all their expenses associated with taking additional courses, including living accommodation costs if the course is not offered near the nurse's home.<sup>31</sup>

From the point of view of the system, nurse training or skills development can be costly and wasteful. For that reason, perhaps, paid education leave to take extended courses is rare in Canada. Jean Smith, registrar of the Alberta Association of Registered Nurses (11,330 members employed full-time, 7,142 working part-time), says it's typical for nurses to leave the profession to have children. Those absences often cover 10-15 years. Employer-paid subsidies to further the education of nurses can be seen as having little direct pay-back if the student nurses leave

<sup>30</sup>"Position Paper: Educational Leave and Productivity," Manitoba Association of Registeres Nurses, January 23, 1979, p. 3.

<sup>31</sup>"Position Paper: Educational Leave and Productivity," Op. cit. p. 6.



the job for long periods.

It's easy for hospitals and other health agencies that require nurses to bid them away from other employers -- even recruiting abroad (which Smith notes was popular in Alberta in the days of shortages there -- which ended only quite recently).

Alberta presents a classic case of the imbalance between nurses needed and available, a mismatch that training had not anticipated or solved. It would appear on the surface that provincial government policies promoted wider opportunities for young people to train as nurses and then suddenly suffocated their chance to get jobs through restraints on the health-care system. Some proof of this feeling are statistics for graduates from provincial nursing schools and vacancies (from a survey of 165 health care institutions):

<u>Vacancies</u>	<u>Graduates</u>
(Jan., 1982) 600	523 (1980)
(Sept., 1982) 228	582 (1981)
(Jan., 1983) 99	615 (1982)

Source: Alberta Association of Registered Nurses

Alberta had moved to respond quickly to perceived shortages of nurses with special skills through the use of a minister's special grant in the department of advanced manpower. Nurses taking refresher courses were given subsidies, but the fund has been depleted with no plans to replenish it.

Representatives in the profession from management and the labour side agree (perhaps surprisingly) why training is not as available as some would like. Norma Clark, director of patient care services for the

industry's Ontario Hospital Association, says "hospitals don't have the money to pay for continuing education" and that "the nurse might leave after you've spent money on her."

The Ontario Nurses' Association has tried without success to bargain for paid employer-paid education leave to help nurses afford to up-grade their skills. Its research director, however, says nurses themselves are not united on the subject. Some feel, "Why bother to fund their training in (specialty) areas if they don't get better pay in them?" Kitty O'Shaughnessy, research consultant to the Saskatchewan Association of Registered Nurses, says hospital management attitudes are that a nurse is "just a clinician" and that they will have to pay nurses more if they are better qualified.

Many agree that training has not provided a solution to nursing shortages in the past because while there may be personal interests in advanced education nurses find their new skills worth little in new benefits or pay. According to Tom Patterson, executive director of the Nova Scotia Nurses' Union, a nurse trained in a speciality area (gerontology, psychiatric, chronic care) earns \$500 a year more than nurses with no special training in medical specialties. Senior nurses still must work the same late-night shifts at virtually the same pay as novice nurses, he points out.

Nurses' association executives generally agree that forecasting demands or shortages in nursing is no special problem. Shortages exist in remote areas and for nurses with special training. But Manitoba will graduate about 200 nurses this year and not all will get jobs in the province, according to Kay DeJong, continuing education advisor at the

Manitoba Association of Registered Nurses. De Jong, however, praised a training program halted about two years ago by the federal government that paid 60% of salaries for nurses attending courses in speciality areas, such as intensive care, during working hours. Hospitals paid the balance of the nurses' regular salaries.

The hopelessness of forecasting in times when governments close the purses to health care is illustrated by the New Brunswick Nurses' Association executive director, Bonnie Hoyt-Hallett. She notes that as recently as 1981 hospitals recruited in England and Scotland for nurses due to shortages. Nursing school enrolment jumped. But now recruiting abroad has stopped, fewer nurses than in the past are leaving the profession (Hoyt-Hallett blames the poor economy), and New Brunswick has a surplus of nurses. Despite the considerable sums spent on educating them, 1,100 nurses in New Brunswick are not working (or not working as nurses). Alberta has 1,813 nurses not practicing as nurses.

The waste in training nurses who do not practice (by choice or because they cannot get jobs) could be staggering. The research director of the Ontario Nurses' Association, Bharrat Latchman, says Ontario has 125,000 registered nurses, but only 65,000 are working in the profession.

Betty Secord, senior executive officer of registration at the College of Nurses of Ontario, says records show 14,950 nurses trained in the province are working outside the province, indicating that Ontario taxpayers have paid for skills the provincial health system may never use again.

Ontario's experience is typical of the cyclical nature of nursing personnel demands. The nursing schools have been given money



and "faddish" recruiting drives opened. Lynn Truax, consultant in the policy analysis and research branch of the manpower planning section in the Ontario Ministry of Health, says a nurses' surplus in 1976 led to an over-reaction by the government. The number of places in nursing schools was cut drastically. In 1980-1981, a shortage developed.

She blames the surge in demand to changing health-care patterns -- almost impossible to predict. Patients were admitted to hospital who were more seriously ill than in previous years; some no doubt were sustained by life-saving mechanical equipment. The result was a need for more nursing than moderately-ill patients require.

Truax says it is hard for the ministry of health "to get a handle" on the surplus situation. Among 30,000 hospital nursing positions in a survey earlier this year of 262 hospitals (which employ about 70% of all the nurses in the province), only 98 vacancies (an 0.3% rate) were reported. Nearly 9 hospitals in 10 had no vacancies at all.

Truax says "a surplus is now happening in a big way." Her study of 16 nursing colleges in November, 1982, found 1,600 graduates with nursing diplomas during the year, and 62% (991) had not found jobs. Only 380 were still looking for nurses' jobs; the rest had given up, says Truax. She says the reasons for the sudden surplus include fewer resignations (which she blames on the recession, which encourages women to stay in their current jobs); more nurses staying in Ontario, and the profession is almost 99% female -- women have fewer opportunities to switch jobs even in a healthy economy. (Efforts to de-sex nursing might yield "results" if the aim were to curtail turnover.)

Truax and other analysts in the health field wonder if more

education is better -- at least in the post-secondary education sector. The Canadian Nurses' Association, sensing perhaps that more formal training would improve the pay of nurses, has called for national requirements to compel nurses to have at least a bachelor's degree to enter the profession. "There is no documentation that shows that B.A. nurses are any better than those with a diploma," says Truax. She calls the cost implications of such a move "staggering."

So the skills development "solution" then has not worked -- for the nurses, whose pay has not risen much, nor have their jobs become more secure (or more plentiful). And governments perhaps are questioning the provision of more training to a profession that some experts (like Truax) note has more on-going education and skills development in place than any other industry.

Of course one difficulty for the nurses (and perhaps for the health system as a whole) is that nurse training at one hospital is not necessarily valid at another institution. Educators and employers "must get together to standardize requirements and make course achievements more portable," says Truax.

Margaret Ethier, president of the United Nurses of Alberta, echoes this theme. "Training doesn't affect the shortage-surplus problem. It does affect the quality of care for the patients, and thus it affects the nurses' outlook on their work."

Ethier and other experts in the field agree that working conditions, more than skills development, are linked to the mismatches between available skills and demand in the nursing market.

"Why do nurses leave full-time nursing?" asked the Manitoba Organization of Nurses' Associations, in a submission to a government inquiry last year. "Nursing as a profession has not benefitted from the vast sociological changes brought about by the women's movement. Hospital administration and physicians all too often view nursing in a traditional mode and have remained inflexible and insensitive to the changing needs of present day nurses as women, professionals, wives and mothers." (Emphasis in original.) "It is apparent that nurses themselves are abandoning the traditional view of themselves and are looking for more regular lifestyles."<sup>32</sup> (Nonetheless, 36% of Manitoba nurses work part-time, according to the association, reflecting some consideration by employers for demands for flexible scheduling.)

The focus on local or "micro" conditions of work (and not structural conditions such as larger issues of fertility, the general public's demand for health care, the state of economy), would seem to be good places to investigate in any inquiry of obstacles to training solutions in the anticipated desires of employees to up-grade their qualifications.

While some politicians comment that the peaks and valleys of nursing employment "is a problem that is shared by almost all jurisdictions in the western world,"<sup>33</sup> there are indications that health institutions are trying to "treat the system" with human resource responses to solve at least one problem -- retaining qualified staff.

<sup>32</sup>"Part-time Employment in Nursing," Submission to Commission of inquiry  
<sup>33</sup>into Part-time Work," September, 1982, p.9.  
 Ontario Hansard, Op. cit., p. 1654., Hon. Bette Stephenson.



Turnover remains high in the United States among nurses, but to reduce it hospitals are turning to new "fringe benefits" such as day care for the children of hospital staff, stable schedules without rotation through various work shifts, tuition reimbursement for career courses, richer life insurance plans and four-day (usually four-night) work weeks.<sup>34</sup> (The turnover rate in North America is 30% annually, according to the Ontario Nurses' Association.)

Advertisements for nurses at American hospitals promise "tremendous income plus sanity," and "predictable time off." But a nursing school professor from the University of Texas, Dr. Mabel A. Wandelt, who surveyed 3,500 nurses on their occupational dislikes, found:

Nurses quit because they are dissatisfied with their working conditions, not because they can get some unusual perk somewhere else. The nurses we surveyed objected to the absence of administrative support, inflexible working hours, the lack of child care, frequent overtime with no additional compensation, and limited provisions for refresher or other educational courses.<sup>35</sup>

Canadian data support the view that training is perhaps part of a comprehensive response to the mismatch between available labour and skills in demand. Features of the workplace itself are getting more attention. B.C. Research collected data on 8,000 hourly-paid and salaried employees in 1981 and 1982 on labour turnover. "Very few organizations know their direct costs from absence and labour turnover," say the authors of the study. "A group of hospitals in the province estimated their

<sup>34</sup>"Keeping Them on the Job," New York Times Supplement, Op. cit., pp. 12-15.

<sup>35</sup>Ibid. p.14.

combined annual sick leave costs at \$50 million."<sup>36</sup> The researchers speculate that high rates of turnover indicate "work environment or morale problems in the workplace."

The researchers found that hospitals had generally lower absenteeism rates than private sector industries. But in all industries on the average females have higher absenteeism rates than males, and the average length of service of the employees studied (an indicator of turnover) was 85.1 months in hospitals, seventh-ranked among 11 sectors (meaning six other sectors had lower turnover rates). "Labour turnover, industrial accidents, and absences from work," say the authors, "can be regarded as the human behavioural equivalents to the replacement, breakdown and downtime associated with the technical systems of a workplace."

Nursing field experts acknowledge that when shortages occur they are due to some of these workplace factors -- none having to do with lack of skill development alone. Cathryn Wellington, a labour relations officer with the British Columbia Nurses' Union, says low pay compared with other professions demanding similar educational requirements contributes to turnover and shortages. Another reason is stress, on-the-job injuries, weekend work, "graveyard" (overnight) shifts, contact with chronically or terminally ill patients -- all leading to symptoms she summarizes as "burn-out."

A third reason for shortages is that women leave the profession to have children, and a fourth is the limited decision-making power of a nurse compared with the nurse's capacity for greater responsibility.

This is not just a labour point of view. The Canadian Hospital

<sup>36</sup> Labour Research Bulletin, "Provincial Worklife Pilot Survey," B.C. Labour Department, December, 1982, p. 25.

Association's director of the nursing unit administration program, Monique Boulerice, agrees that shift work, maternity, work-related stress, and the lack of child-care arrangements at the hospital are major factors in turnover. She also cites the nurse's lack of "voice" in the system (compared with the influence of doctors and patients) and "poor" relationships with doctors.

Saskatchewan nurses' association official Kitty O'Shaughnessy says, "If there's more training available, there's greater job satisfaction. If an employer offers to help increase skills, this leads to increased job retention. The nurses feel they have some worth and that continuing education is not just a frill, but a necessity."

The implications for government policy makers are that considerable roadblocks could be in the way of skills development in nursing (as in other occupations) if local conditions in particular workplaces or in the sector as a whole aggravate turnover problems. Nursing experts in human resource planning and nursing union leaders believe these workplace conditions are a considerable factor in decisions on whether to remain in the profession -- especially when economic conditions do not retard the easy movement to different employers or to different occupations.

The universality of the profession's problems, as the evidence cited above shows, would indicate caution for policy makers as they proceed to fashion responses to training issues. The turnover, shortages and surpluses of recent years that have afflicted nursing practitioners and their employers may give "false clues" about the true nature of the problem. Even international evidence points to the workplace focus,



where training is one of several responses. In Jamaica recently a nine-day-long nurses' strike was blamed on the lack of sufficient pay differentials between highly-trained and less educated nurses. "The prime minister himself has pointed out that government considers that the granting of across-the-board increases to private sector workers disguises the differences in training and experience of specialized and qualified staff and works as a disincentive to their retention in the public service....," wrote one newspaper columnist of the island's management-labour difficulties in the health care field.<sup>37</sup>

The Economic Council of Canada has pointed to the motive for the reluctance of employers to train. ". . . Employers may be less inclined to pay for general training on the grounds that costs are hard to recover, since workers with these portable skills can easily find work elsewhere."<sup>38</sup> Rather than promoting specific training, which is available more easily in workplaces, governments should focus on general training instead, says the council.

The pursuit of additional skills development is a central purpose of most nurses' collective bargaining goals in Canada. A number of responses are being tried across the country.

-- A one-year course in mental-health nursing at the Saint John School of Nursing is offered New Brunswick nurses with the support of

<sup>37</sup> The Gleaner (Kinston), column by Franklin McKnight, April 8, 1983 courtesy of Inter Press Services, Montreal.

<sup>38</sup> "Government aid off target," Au Courant, Economic Council of Canada, Vol. 3, No. 4, 1983, p. 4.

their association. Another course, a three-month session on critical care, also at the school of nursing, uses federal and provincial training money to pay the instructors and the salaries of nurses who attend to upgrade their skills and learn new qualifications. The nurses' union has negotiated \$150,000 as a yearly lump-sum paid educational leave fund in bargaining with the provincial government for its 3,400 members in provincial hospitals.

-- Nurses in Manitoba who have not worked in nursing recently are urged by their union to take federal government training funds available to help pay tuition in a refresher course at Red River Community College.

-- The Alberta Association of Registered Nurses maintains a loan and bursary fund to offset the costs of additional training for its members. In some hospitals agreements with the association provide subsidies of 15¢ to 71¢ an hour for nurses attending courses.

-- The United Nurses' Federation, in Quebec, has the oldest paid educational leave plan, begun 10 years ago. For each month the nurses take off to train (at full pay) the nurse promises to work at that hospital at least three months. If the hospital pays less, the nurse's commitment to return to work is reduced proportionately. Between 300 and 400 nurses got \$5.5 million in 1981 for upgrading as bursaries, according to Helene Wavroch, president of the federation.

In nursing as in other fields, the mere provision of education and especially skills development can have unforeseen and perhaps unknowledgeable consequences that persons recommending policy do well to consider before daring to advise. As the Economic Council study referred

to above noted, education is not always a "win-win" solution for all partners in the profession. Other commentators have noted that "new workers," especially younger and better educated graduates of the primary and secondary school systems of the country, are accepting as "givens" that their pay will be adequate but want much more than only the "extrinsic" rewards of a job.

"Skills can no longer be defined in terms of a particular set of actions, but as general ability to understand how a system functions and to think flexibly in trying to solve problems," a business school representative has written. "Educated workers require more varied work, which leads in turn to blurred distinctions between workers and managers."<sup>39</sup>

Again and again interviewees said that organizational change and not skills improvement alone was required to "solve" the nursing profession labour market supply-demand puzzle. The executive director of the Nova Scotia Nurses' Union, Tom Patterson, commented that "A new type of career development must be examined. Nurses need to improve clinically so they can advance through the system, and not have to leave the bedside. Right now the only advancement is head nurse. This is resulting in a decreased level of health care and increased costs to the system."

Patterson would have nurses become the "point of entry" for patients in the system. While that could involve the need for skills development, it would certainly create a clash with the doctors. Yet

<sup>39</sup>"The Soul of a New Workers," by Larry Hirschhorn, Working Papers, January-February, 1982, pp. 42, 45.



something needs to be done, Mr. Patterson insists. Turn-over among nurses in 1980, according to the Nova Scotia Registered Nurses' Association, cost hospitals \$5 million.'

The Canadian Nurses' Association, as mentioned earlier, would add costs to the post-secondary education system by requiring that "the minimal educational requirement for entry into the practice of nursing" be a baccalaureate degree in nursing by the year 2000.<sup>40</sup>

Jean Smith of the Alberta Association of Registered Nurses believes the most serious shortage of nurses is in administrative posts, and she believes government initiatives should focus there. Nurses "are given no power," she says. "They are given the responsibility but no authority."

For management in the nursing field, the nurses' association goal of three or four years of university for every nurse would be adverse to the interests of the profession, says Norma Clark of the Ontario Hospital Association. Most women are not willing to devote four years of education and submit to shift work and weekend hours as the return on their investment. She believes requiring such educational background would dry up the supply of nurses (and probably greatly increase wage pressures).

The B.A. degree is aimed at those preparing for administrative posts, says Clark, and giving it to all nurses would create "too many chiefs."

<sup>40</sup> Cited in "Presentation to the Tri-universities Advisory Committee on Baccalaureate Nursing Education," Manitoba Organization of Nurses Associations, June, 1982, p.2. (M.O.N.A. estimated 95% of its membership would "avail themselves of post-diploma baccalaureate education" if the licenced practical nurse is phased out.)

It's not clear who benefits most now from additional training (as mentioned earlier) since pay scales reflect little difference between general nurses and those with higher qualifications. Such lack of recognition for their advanced training could be a serious bottleneck in reforms of the system. A nurse with a B.A. earns \$100 a month more than a nurse without one, and a nurse with a master's degree \$150 a month more, according to the executive director of the Manitoba Organization of Nurses' Associations, Irene Giesbrecht. In specialty fields the increment is about \$50 a month more in Manitoba.

The nurses' associations in Manitoba have combatted the profession's shortages problem through compensation, raising wages some 50% in the past decade (yet wages still trail 21% behind Alberta, British Columbia and Ontario, according to M.O.N.A. officials.

There is, however, no strong interest among the nursing field leaders for government-legislated paid education leave. They seem to prefer to leave such questions to arrangements worked out locally, with government supporting expanded training programs through tax breaks, wage subsidies or other forms of aid. The lack of interest in universal paid education leave could be the result of fears in nursing and other professions of suddenly being swamped with potential recruits. It is clear whose interests are involved when "shortages" and surpluses appear. As the Economic Council of Canada reported recently, if manpower training programs could turn out more skilled workers "inflation would be curbed. . . through a moderating of the wages firms need to pay to attract skilled labour."<sup>41</sup>

<sup>41</sup> Au Courant, op. cit., p. 4.

In addition to wage impacts, expanding the supply of skilled employees in many occupations would dilute the bargaining power -- and the job security -- of those already in the field, thereby reducing the chance for support from key "stakeholders" in the issue.

Quebec's Helene Wavroch says research by her organization indicates the system has too many orderlies and nursing assistants and still needs more nurses. If she is right, it indicates a solution to the nurse shortage or the potential future mismatch between demand and supply is in the hands of the profession and the health-care institutions -- Training less skilled people already in the hospital system to handle nursing responsibilities.

Like the well regarded apprenticeships and re-training programs in parts of the printing industries (see section 2 of this report), workplace education in the hospitals could be the most effective and efficient response to the nursing demand-supply problem.



#### 4. Alternative "scenarios" and summary

In the preceeding sections we have examined some of the questions that could be asked about the potential effects of changing the way Canadians train for work, especially for technical skills applicable to certain occupations. We have examined the feelings and experiences of experts in two occupations where re-training, skills development and other responses have been commonplace for a period sufficient to produce factual, observable and reliable evaluations of the effectiveness of the response.

We have mentioned that training is but one of the responses available to society to "solve" labour market dissonance. We have observed in previous sections that there is not always agreement among those with an interest in the matter about what to do, or even about what has been done and what the effects are likely to be of a modification from present practices.

We have observed that training or skills development involves considerable costs and therefore will be evaluated as society choses its pathway into the maze of questions about future labour market demands and supplies the same way as other programs or initiatives and expenditures that ultimately are paid by the people these programs intend to serve. Some of these other responses compete inevitably for limited financial resources in a welfare or education "envelope" of government and society. Leave must be paid by someone, for instance, and even the concept of limited leave competes with other forms of temporary absence from work that are not yet developed in Canada but that appear to hold attraction for working people in all ranks and sectors. These include parental

leaves of absence (for maternity, paternity and the adoption of a child) and leaves for work outside the primary workplace (such as in community service or political life).

The pressures on governments to "do something" about the severe and apparently growing problem of unemployment (see projections for this study that follow) compete with costs imposed on employers to contribute in other ways to the productivity or adaptability of the work force, such as training programs.

Motivation and productivity are fairly new but strongly felt "needs" in the Canadian economy, with the introduction of a national productivity centre in the April 19, 1983 federal budget and other measures. Time away from work for study and training is not inherently or obviously desirable for all employers (or employees) in all circumstances. The psychologist Frederick Herzberg has commented sarcastically about motivation through less work: "This represents a marvelous way of motivating people to work -- getting them off the job! . . . The fact is that motivated people seek more hours of work, not fewer."<sup>42</sup>

Of course prime motivators that contribute to constant learning on the job, such as more satisfaction, "power" at the workplace, and responsibility, dignity and the opportunity for advancement can certainly be enhanced through education and re-training and skills development. But whether society will permit limited resources to be used to enhance the satisfaction of an "elite" with "good" jobs while unemployment grows

<sup>42</sup>"One more time; How do you motivate employees?" Harvard Business Review, January-February, 1968.

remains dubious. For the foreseeable future -- the 5-year scenarios presented in this study -- guessing that most emphasis will be placed by society on income distribution and employment-creation seems safe.

It could become tempting just to let "market forces" and the interplay of supply and demand "solve" the mismatch between openings and skills in the job market. This has been historically (with the assistance of immigration) the way labour in short supply has been recruited for abundant jobs. The escalation of pay in western Canadian resource industries, for instance, and the elevation of pay for workers in most all sectors who have skills, credentials or other "tickets" that testify to their competence has been the "solution" to shortfalls of supply in special parts of the market. Bigger firms have traditionally been able to pick up through virtual auctions the skills they require. In such "good times" labour has not been reluctant to withhold services to enhance the incomes of those with skills in high demand.

Finally the skills development response has enormous appeal to politicians and others with a commitment to define the "work ethic." The imbalances between skills required and available is a somewhat narrow part of the greater issue of how wealth is to be shared, especially when so many observers predict that the 1980s and 1990s will mark a shift in the entire "paradigm" of developed or "advanced" society in terms of the necessity to work at the hours and jobs that have been standard in the industrialized world.

The pay-without-work issue has received little attention in Canada. Appeals for guaranteed annual incomes are rarely heard by



"opinion leaders" or representatives of major institutions. Appeals for earlier retirement, shorter hours of work, or more leisure time reflect how solidly mainstream Canadians accept the "duty" of working for their incomes, and those who slip into the "safety nets" of welfare or unemployment insurance are pitied while their "incomes" from these programs are kept low to continue to provide them with the "incentive" to find work-for-pay.

So strong is the work ethic (which the appeal of training or skills development complements) that the labour movement continues to assert the necessity of "full employment" and uses unemployment rates as an index of the "failure" of the system and of governments in particular to respond to human needs. (Considering the alternatives to work-for-pay this affection for full employment is rational and understandable. Politicians sometimes feel behooved to require "work-for-welfare" or "work-fare," to respond to the perceived public demand that no one be permitted to remain merely a passenger on the economic train.)

This explains the reluctance of most unions to embrace work-sharing or job-splitting, at least at the policy level (where union values are in effect "posted" for scrutiny and promotion ". . . Unions see work-sharing for what it is -- as a poor substitute for economic growth, a gimmick to conceal the gravity of joblessness in Canada, and a surrender of the goal of full employment," says one popular union magazine.<sup>43</sup> This publication also quotes an offshore response to work-sharing: "Politicians and trade union leaders, baffled in their hope of raising the demand for labour now dream of nibbling away at the supply. . . . They have come to talk of work

<sup>43</sup>"Work Sharing," by Ed Finn, The Facts, Canadian Union of Public Employees, Vol. 4. No. 6, June-July, 1982, p. 18.

as if it were a scarce commodity, to be shared out more fairly to those seeking it."

Skills development as a policy has the further appeal of reinforcing long and deeply-felt public admiration for the value of education. Ironically, the improvement of education may inspire in itself less work-for-pay, and compound the unemployment problem, as the New York Stock Exchange noted recently in a research document.

"Whether it is correct to say the Japanese schools are the key to their productivity performance, few can doubt that the schools play an important role . . . . With one of the highest rates of productivity growth in the world, the Japanese people are among the best educated." The report quotes experts who contribute to Japanese education "the one factor" that makes their economic organizations so productive and cites evidence that Japanese high school graduates have "the equivalent of approximately four more full years of school than a U.S. high school graduate" (because the Japanese start school earlier, and the school year is longer).<sup>44</sup>

Labour market institutions such as employer groups and unions have generally favoured more training but disagreed on who is responsible for, most critically about who should pay. This fundamental sweeping support for the concept of training is confirmed in public opinion polls and perhaps results in the increased emphasis politicians give to their training efforts. Provincial governments in Saskatchewan and Alberta have recently given employment and training programs cabinet status.

<sup>44</sup>"People and Productivity: A Challenge to Corporate America," New York Stock Exchange Office of Research, 1982, p. 10.

While government has traditionally supplied some training funds, there has been little evaluation of their effectiveness in meeting broad national labour market goals (an exception would be the Economic Council of Canada study referred to earlier).

Labour unions for their part support a levy-grant system. Employers would receive grants if they train their workers or face having levies imposed as a training tax if they don't provide training. The Ontario Manpower Commission studied the levy-grant system (which is used in West Germany and some other countries) and concluded it's too costly to administer, requiring "an additional 20,000 civil servants."<sup>45</sup>

In a major study of the effects of micro-electronics on employment, the International Labour Organization's key research document concluded that many responses were useful, but re-training was not one of them. The "de-skilling" effects of new technologies plus the potentially massive displacements and redundancies created make the skills-development approach seem too modest (and expensive) as a societal reaction to the issue.

". . . We may be facing a transition towards a society that no longer needs to make full-time use of its entire potential labour force . . . .," said the ILO study. "The decline of job creation in industry has been evident for some time and the tendency is towards a reduction in absolute numbers as well. Services have remained the universal job provider, but can no longer be relied upon . . . because of the introduction of micro-electronic technology."<sup>46</sup>

Part of the challenge in the need for skilled workers is the

<sup>45</sup> Ontario Hansard, Feb. 16, 1983, Hon. Bette Stephenson, p. 7687.

<sup>46</sup> The Impact of Micro-Electronics, by J. Rada, I.L.O., Geneva, 1980, p. 84.



conundrum that re-training for future jobs offers little prospect for those displaced from "past" jobs.

As the ILO and others have observed, the new jobs are tasks of the brain, not of the hands, and it is much costlier and time-consuming to train brains than hands. Skills development -- if promised to those being made redundant or as insurance against future displacement -- could be a blank cheque. Even those with the top skills for the "jobs of the future," such as engineers, find themselves obsolete unless they re-train -- frequently. "The half-life of an engineer is about five years," according to the technical training manager of the Hewlett-Packard Co.<sup>47</sup> To keep engineers up-to-date without sending them back to the classroom) takes about 10% of their working time -- the equivalent of taking a one-term engineering course every year, according to a report by the Massachusetts Institute of Technology.<sup>48</sup>

The problem confronting the policy-maker studying where to spend limited financial resources in the span of education that is continuously increasing at both ends of the life cycle -- from pre-kindergarten to tuition-free university education for pensioners (to cite just two examples at opposite ends of the cycle) -- is finding yardsticks that would produce a fairly certain forecast of the results.

In our earlier sections on graphic arts and nursing we noted that each presented a policy option, and it is perhaps useful to review the characteristics of each training system before summarizing the problem with our forecasts of the potential "training market" in the next

<sup>47</sup>"High Technology," The New York Times, supplement, Sec. 12, March 3, 1983, p. 14.

<sup>48</sup>Ibid.

years ahead.

Briefly, the graphics arts re-training or skills development program is integrated with an approach to managing technological change in an industry, in Canada and elsewhere in the world, that is rapidly absorbing technical innovation. In the Federal Republic of Germany the number of typesetters decreased by 30% in six years -- 1970-1976.<sup>49</sup> Printing is of course only one of the industries from services to goods that are being changed by micro-electronics.

The ILO study concluded that most micro-electronics applications are labour-saving and that the "all-pervasive nature" of the technology means "the compensation theory which maintains that job displacement in one sector will be offset by employment creation in another begins to look distinctly unsound." The "shrine" of the new technology, electronics itself, is undergoing a world-wide phenomenon of decreasing employment.<sup>50</sup>

The nursing profession, on the other hand, exhibits no structured "strategy" to deal with its training or manpower problems in any way as logically formulated as the graphics arts industry. In the former the key variable in determining the supply of skilled workers is the number of places in nursing training facilities; in the latter the key variable is the availability of skilled workers in re-training and a system to modify the supply through work disincentives such as early retirement and measures to ease the pain of "transition"

<sup>49</sup>J. Rada, Op. cit., p. 35.

<sup>50</sup>Ibid., p. 80.

such as supplementary unemployment benefits.\*

Other variables such as the general state of the economy are the same for both industries -- ironically but understandably "poor economic conditions" affects both sectors differently. In the one case the problem is that trained workers can't find first jobs, in the other skilled employees lose their jobs. Regardless of the strong gender characteristic of both professions (predominantly male blue-collar printing and overwhelmingly female white-collar nursing), the general economy "solves" or "worsens" the labour market for each group. Yet in printing the access to a training-and-income security package "tunes" the system while in nursing it is apparent that in both good times and bad times skill shortages and other unanticipated imbalances and "errors" in the marketplace are common.

\* Employers pay \$4.50 a week per employee to the graphic arts supplementary unemployment benefits fund. It entitles laid-off employees to 75% of their regular income up to a maximum of \$225 a week for one year. A second year of benefits is possible if there appears to be little chance the worker can market his or her skills. To qualify for the extended benefits the ex-employee must enroll in a re-training program and pay the tuition. The early retirement plan is financed with an \$11.50-per-week payment by employers per each employee and enables workers to retire at age 60 with \$500-a-month pension until the regular pension and C.P.P. pensions begin.



## CHARACTERISTICS OF SKILLS DEVELOPMENT

IN TWO PROFESSIONS

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Nursing

Technological change not  
a serious issue

Re-training is paid by  
the recipient (tuition)

No early retirement

No supplementary unemployment  
benefits

Heavily unionized

No strong labour-management  
links in training

No formal apprenticeships

Narrow mobility for those with  
highly specialized skills  
(trained in a hospital)

Small pay differentials for  
higher-trained employees

Most re-training is off-site  
outside workplace

Graphic arts

Technological change  
a recognized major issue

Re-training paid by  
the recipient (wage deferral)

Early retirement available

Supplementary  
unemployment benefits

Heavily unionized

Strong labour-management  
collaboration in training

Apprenticeships available

Wide mobility for those with  
specialized skills (trained  
on equipment)

Relatively wide pay differentials  
for employee with special skills  
(apprentice vs. journeyman)

Most re-training is on-site in the  
workplace or labour-management schools

Other occupations would show similar characteristics in their training, but many of these are unique to these professions. For instance, workers in some "essential services" (but not the health sector) receive "free" training and re-training, such as police officers and fire-fighters. Nurses and other health care workers generally contribute to their own education, although most courses are conducted in publicly-supported schools involving a considerable subsidy from taxpayers.

Much printing industry training is also conducted in community colleges (and at some secondary "technical" schools). But the graphics arts re-training program discussed here compliments an array of responses to the industry's labour market issues and at its core the training centres (six across the country) involves no public subsidy either for the classes, instructors, lost wages or tuition of the worker-students.

The federal government has refused requests for financial aid, in fact, from the joint employer-union Graphics Arts Training Institute, according to Leonard Paquette, Canadian vice-president of the Graphic Arts International Union.

The graphics arts and nursing industries show another similar characteristic in the aptitude of the workers in that in most cases employees in both areas have learned their work skills as "tool courses" and do not have post-secondary school degrees. Tom Patterson of the Nova Scotia Nurses' Union notes that 80% of nurses in the province do not have degrees, for example.

To the extent that the graphic arts re-training program is based on protecting the interests of managers and employees (for a reliable pool of trained workers and for skills that reinforce security), the arts

program meets a key test of "confidence" from those who are paying for it and who derive benefits from it. From the point of view of public policy it has (with its supplementary "safety net" features) potential appeal for policy makers and advisers since the industry has not "externalized" its costs to the public, behind tariff walls to protect jobs, markets or incomes, for example.

Whether the nurses' response -- providing basic training to entry-level workers and leaving the burden of further specialized up-grading to the individuals themselves -- or whether the graphic arts response -- with the "players" jointly paying for the cost of the industry's considerable skills development needs -- is the "right" response for skills development is not easy to say. But the authors believe the latter features worth studying -- especially in view of the data and forecasts in the concluding pages of this report. We have forecast the potential market for re-training in the context of employment policies that would aim to "tune" the labour market to the consensus view that "full employment" or "a right to a job" is a desirable state in Canada. Evidence of such consensus is not hard to find. The Canadian Labour Congress has said that "technological change is one of the most useful and important instruments that we can use to achieve our social and economic objectives . . . . Under conditions of full employment, technological change is a definite boon to society. Resources (and especially labour) are released to more productive employment. Consequently, productivity is increased which could result in both lower prices and in higher wages or standards of living. Under these conditions the costs of technological change would appear to be small relative to the above benefits. These costs



would be related to the displacement of labour and would include relocation, retraining and information-rated costs."<sup>51</sup>

The bi-partite Major Projects Task Force set up in response to a federal-provincial ministers of industry conference in 1978, reported its faith that major developments "considered for construction during the period to the year 2000 . . . could help to reduce unemployment." But the authors noted that "the coincident development of several major projects may severely stress Canada's ability to provide an adequate, stable supply of trained personnel. Innovative approaches towards training and inter-occupational mobility will need to be developed."<sup>52</sup>

Projections of the true "problem" seem out of focus contrasted to the stunning reality of high unemployment, the postponement or cancellation of major business investments and the employment casualties of an increasingly mechanized age. The forecasts that follow would indicate to the authors the desirability of looking (as the graphics arts industry has done) to work disincentives coupled with skills development and efforts to reduce hours of work through earlier retirements, shorter working hours, longer holidays, work-sharing or job-splitting.

Early-retirement schemes, in themselves are not always popular. Even in dirty and risky coal mining an early-retirement program at the Cape Breton Development Corp. (Devco), considered by the former president to be "a more humane way" of reducing the work force, has entered the history books as "The hated pre-retirement-leave plan" that "generated strong ill-feelings toward the corporation among Cape Bretoners."<sup>53</sup>

<sup>51</sup>Policy Statement, "Technological Change and Jobs," 12th CLC Constitutional Convention, 1978, p. 3.

<sup>52</sup>A Report by the Major Projects Task Force on Major Capital Projects in Canada to the Year 2000, June, 1981, pp. 33, 35.

<sup>53</sup>Government in Business, by Marsha Gordon, C.D. Howe Institute, Montreal, 1981, p.

(The basic technique employed in the forecasting below is the use of regression analysis to find a "fit" between changes in the gross national product and the number of jobs created in various sectors.)

The problem of retraining workers whose existing skills are no longer needed has been made substantially more severe by the depression or recession of 1981-82. For the first time in post-1930s history, unemployment was increased by the loss of jobs rather than by the labour force increasing more rapidly than the number of jobs. From the middle of 1981 to the end of 1982, almost 600,000 employed people were put out of work, nearly doubling the total number of unemployed and substantially changing the mix of occupations, sectors and ages represented in the pool of unemployed workers.

The problem of retraining in the period before the current depression could be stated in this way: "Which sectors and occupations need fewer workers, and which sectors need more. And how can the workers who are becoming redundant in one sector or occupation be retrained to work in another?"

The skills development or skills replacement problem now starts with the additional difficulty of retraining and placing an unknown but probably large proportion of the 600,000 workers who were displaced by the depression.

Analysis of economic change in the past eight years shows that the various sectors and occupations do not grow or shrink at equal rates under given conditions. For every \$10 billion increase in real gross national product (i.e., G.N.P. adjusted to remove the effects of inflation), employment increased 337,000. This was distributed through the nine

main occupation groups as follows:

Management & professional	118,000	
Clerical	59,000	
Sales	19,000	here called
Service	<u>70,000</u>	service-oriented
		occupations
Sub-total	266,000	
Primary	11,000	
Processing	40,000	
Construction	loss of 1,000	here called
		goods-producing
Transportation	9,000	occupations
Materials handling	<u>12,000</u>	
Sub-total	71,000	

As these numbers indicate, the effect of recent economic change has been that 79% of new jobs created by economic growth have been in the service-oriented occupations, although in the pre-depression labour market of mid-1981 only 65% of jobs were in these occupations.

Future economic growth is likely to create about four service-oriented jobs for each goods-producing job created.

There are now (4th quarter of 1982) 1.410 million unemployed, of whom 714,000 are categorized as in goods-producing occupations. A trend extrapolation of recent labour force participation rates, combined with probable population shifts (Statistics Canada's population projection No.3), indicates an increase of 1.224 million in the labour force over the next five years. The potential number of people for whom jobs will have to be found in the next five years is therefore at least 2.634 million (this takes no account of the numbers who will retire).



For purposes of this analysis, it has been assumed that the jobs the new entrants to the labour force will try to get will be distributed in the same proportions as the job-creation pattern just described -- that is, 79% in service-oriented occupations, etc. These new entrants can all be defined as being in one of nine occupational labour forces.

The 2.6 million job seekers of 1987 can therefore be expected to include 970,000 looking for goods-producing occupations. How many jobs are likely to be created for these potential job-seekers?

Three different economic scenarios were examined: low growth (about 1% a year increase in gross national product), medium growth (about 2% a year), and high growth (about 3%). The results were as follows:

<u>Low-growth scenario</u>		<u>Medium growth</u>	<u>High growth</u>
GNP, 1987 (constant 1981 \$s)	\$400 billion	\$500 billion	\$600 billion
Employed (million)	11.100	11.940	12.780
Total new jobs created	0.595	1.430	2.270
Total job seekers	2.635	2.635	2.635
Workers Surplus to requirements	2.040	1.205	0.365
Unemployment rate	16%	9%	3%
In service-oriented occupations			
Total new jobs created	0.470	1.130	1.790
Total job seekers	1.665	1.665	1.665
Workers surplus to requirements	1.195	0.535	(0.125) (shortage)
Unemployment rate	14%	6%	(-1%)
In goods-producing occupations			
Total new jobs created	0.125	0.300	0.480
Total job seekers	0.970	0.970	0.970
Workers surplus to requirements	0.845	0.670	0.490
Unemployment rate	19%	15%	11%

When prospects for the various occupations are examined, it becomes clear that few of them offer much scope for the additional new entrants who would be "created for work" by retraining programs.

The workers who are most likely to be surplus to requirements are those in processing and construction occupations. The occupations most likely to need, or at any rate to be able to accept, additional new entrants, are the management and professional group, the clerical group, and the services group. This is a daunting and depressing mismatch of probable skills and attitudes.

A smaller number of openings are likely to be found in the sales occupations.

If the economy does very well, additional although limited opportunities might be found in some primary, processing, transportation, and materials-handling occupations, although it has to be stressed that the number of existing workers in those occupations looking for work under the best conditions is likely to be on the order of 8%-9% of the labour force in those occupations.

The prospects for sustained 3% a year growth of real G.N.P. over the next five years would not be rated too highly by most economists. A figure in the range of 1%-2% is more likely. Under those circumstances, only the managerial/professional occupation group can be expected to have an unemployment rate below 7%, and at 1% growth even the services group will likely have a 19% unemployment rate.

From this it may be concluded that in general the likelihood of being able to place a retrained worker from a goods occupation in the next five years is very low, and that only placing the unusual displaced worker who can be trained for a managerial or professional occupation



would be likely to repay the effort and money involved.

Another approach to the problem of the structural dislocation of goods-producing workers, and one that is entirely different in principle, would be to increase the proportion of part-time workers in the goods-producing occupations.

At present, taken as a whole, only 7% of these employees work part-time. Some 3.4 million full-time and 0.2 million part-time workers in these occupations now work a total of about 140 million person-hours each week. Some 0.8 million workers from these occupations are likely to remain unemployed in 1987, in the worst case. If they were to be absorbed by increasing the proportion of part-timers, the same number of work hours could be spread over the 4.4 million workers in the following distribution:

2.8 million full-time workers (64%)

1.6 million part-time workers (36%)

If it was accepted that frictional and other unavoidable kinds of unemployment might give an unemployment rate of 5%, then the distribution would be as follows:

3.0 million full-time workers (71%)

1.2 million part-time workers (29%)

This is still a sharp change from the present situation, although not all that different from the experience in some other sectors and occupations today. Another approach would be to cut the average hours of work of those now employed, again with the object of spreading the work over a larger group.

Again assuming a 5% unemployment rate, the objective of absorbing all the other dislocated workers and new entrants could be achieved by

67)

reducing the full-time week from 40 hours to 32 hours and the part-time week from 15 hours to 12 hours -- by cutting out one day's work in five, that is.

The added workers in this scenario would be distributed between full-time and part-time positions in the same proportion as the existing workers.

A combination of these two approaches, again leaving 5% unemployed, could follow the following scheme:

3.6 million full-time workers (85%) @ 36 hours/week

0.6 million part-time workers (15%) @ 13.5 hours/week

Under this scheme, there would be more "full-time" workers employed in the goods-producing occupations than there are now, so no existing full-time worker would have to move to a part-time position, and the week would be reduced by only half a day. (In the case of the part-time workers, certainly, and perhaps in the case of the full-time workers too, this might be more easily accomplished simply by taking off one full day a fortnight.)

Schemes of this sort seem more likely to produce employment than retraining displaced goods workers for managerial/professional jobs.

April, 1983.

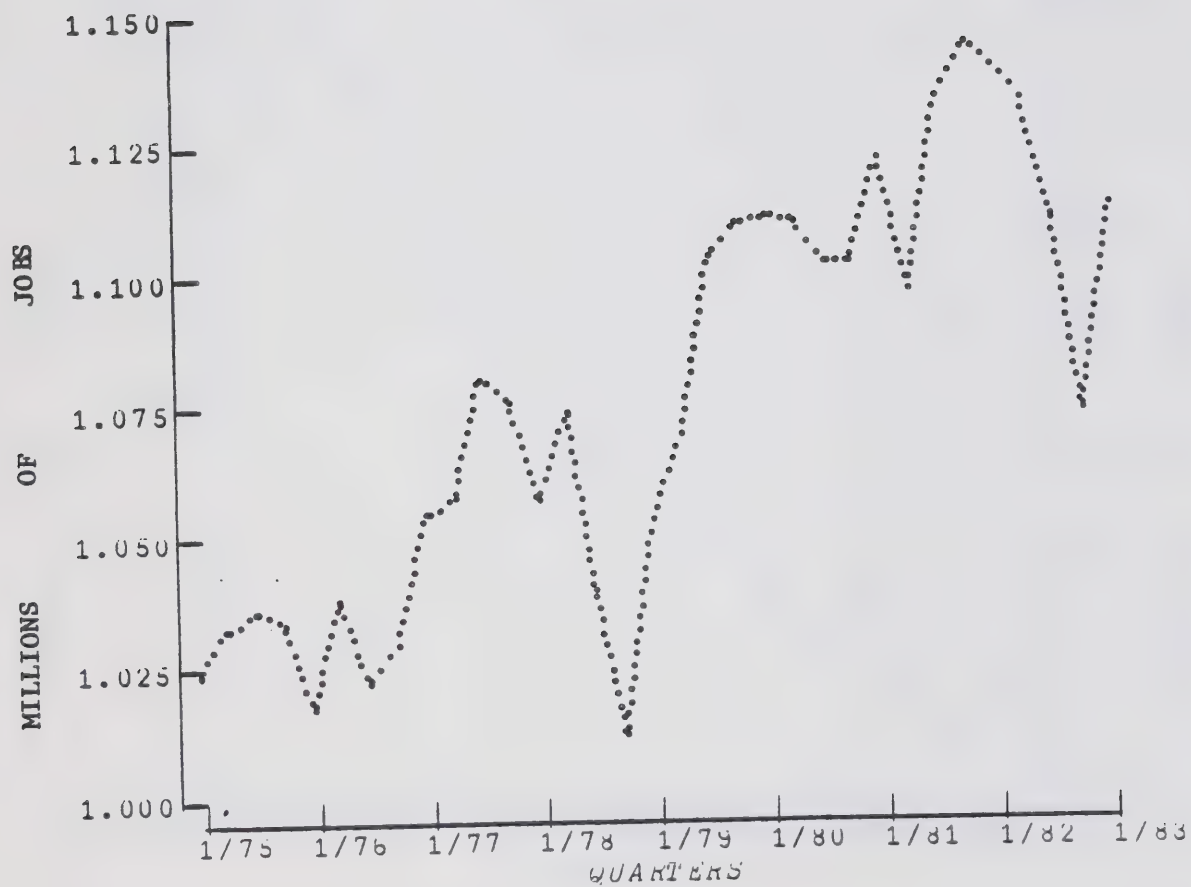




The following pages contain graphs depicting the changes in employment used as foundation points for the forecasts in pages 61 - 67 in this report.

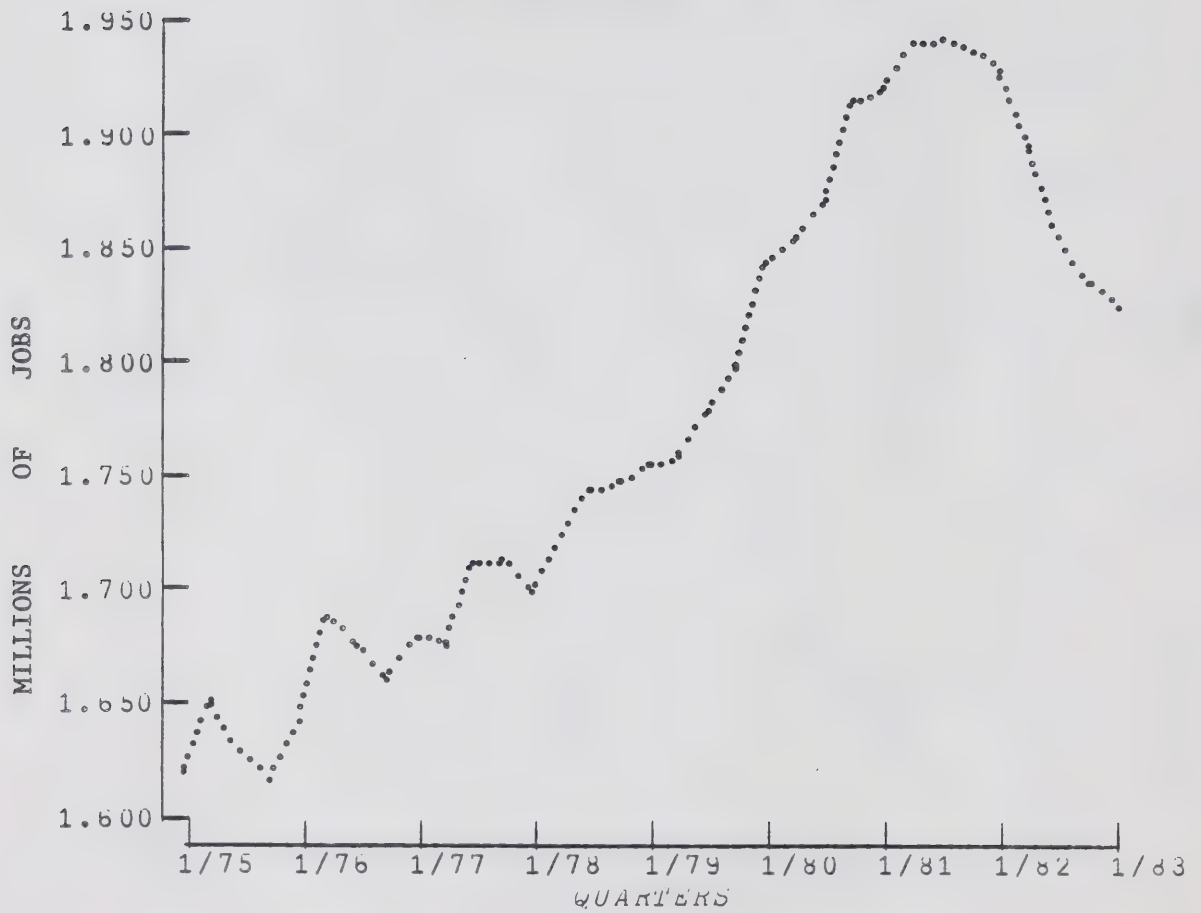


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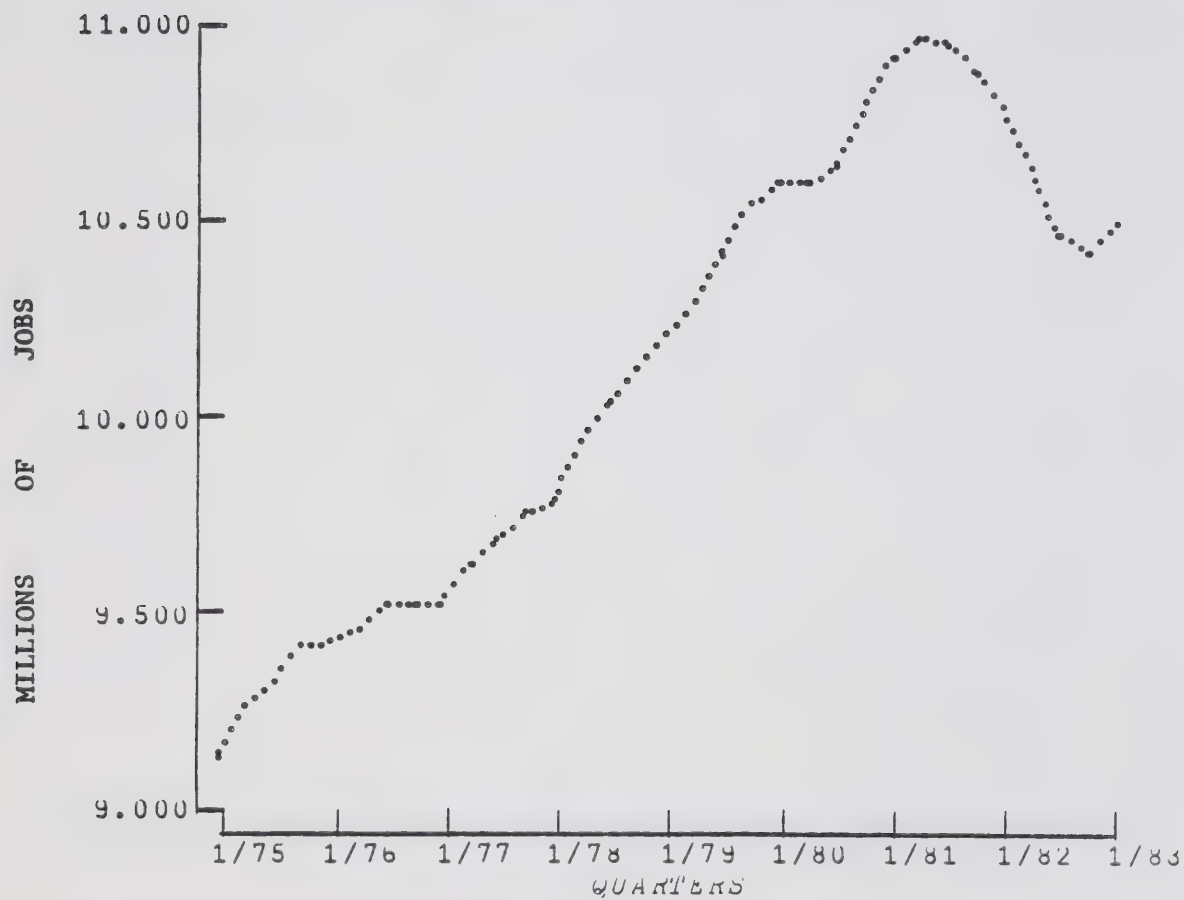




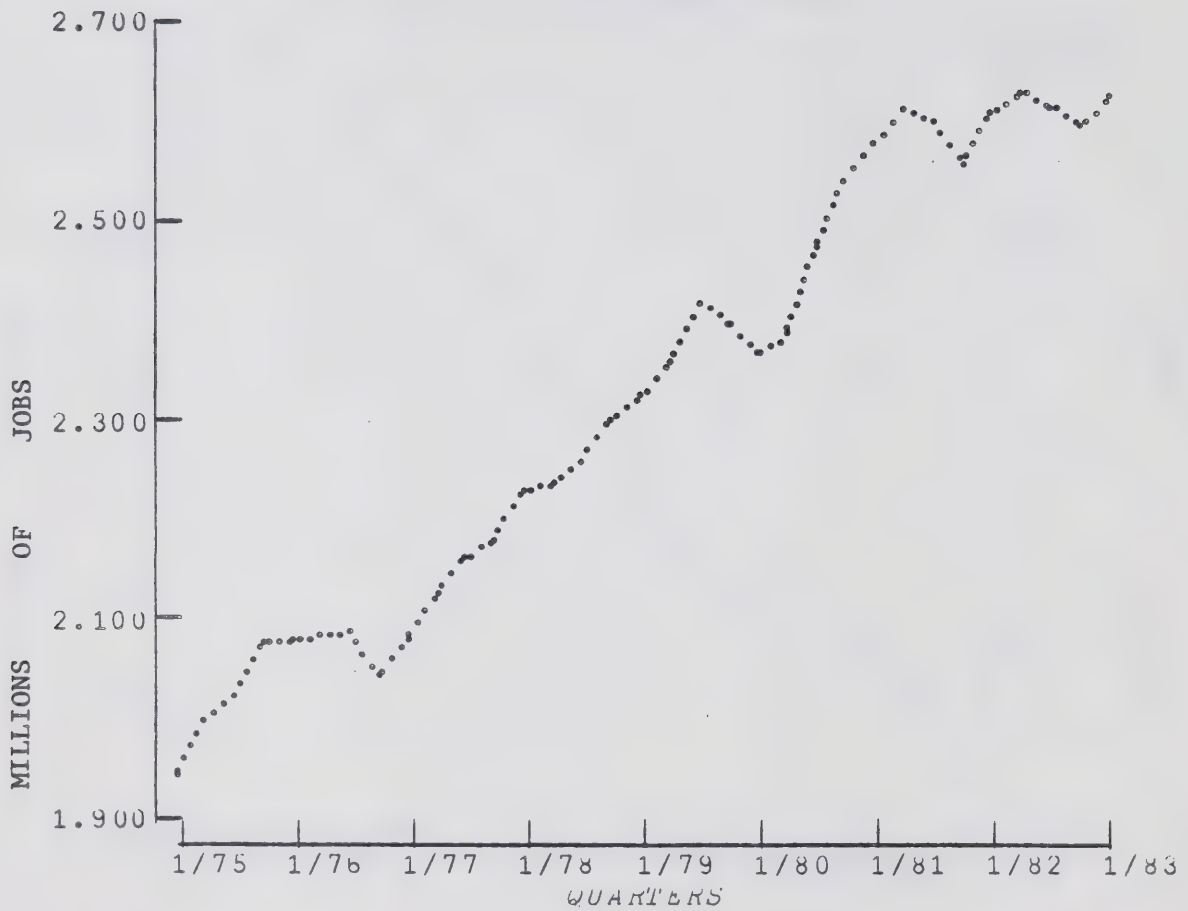
CLERICAL EMP



TOTAL EMPLOYMENT IN MILLIONS

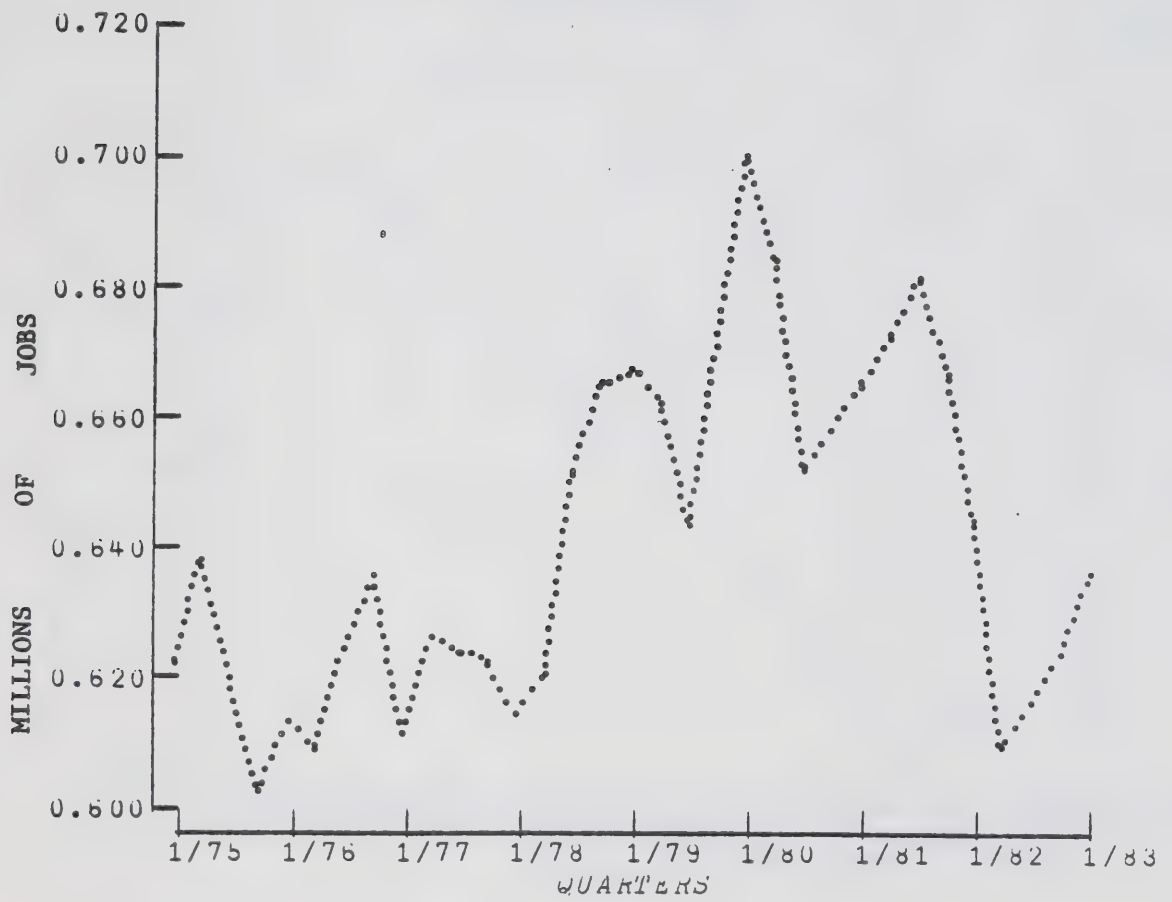


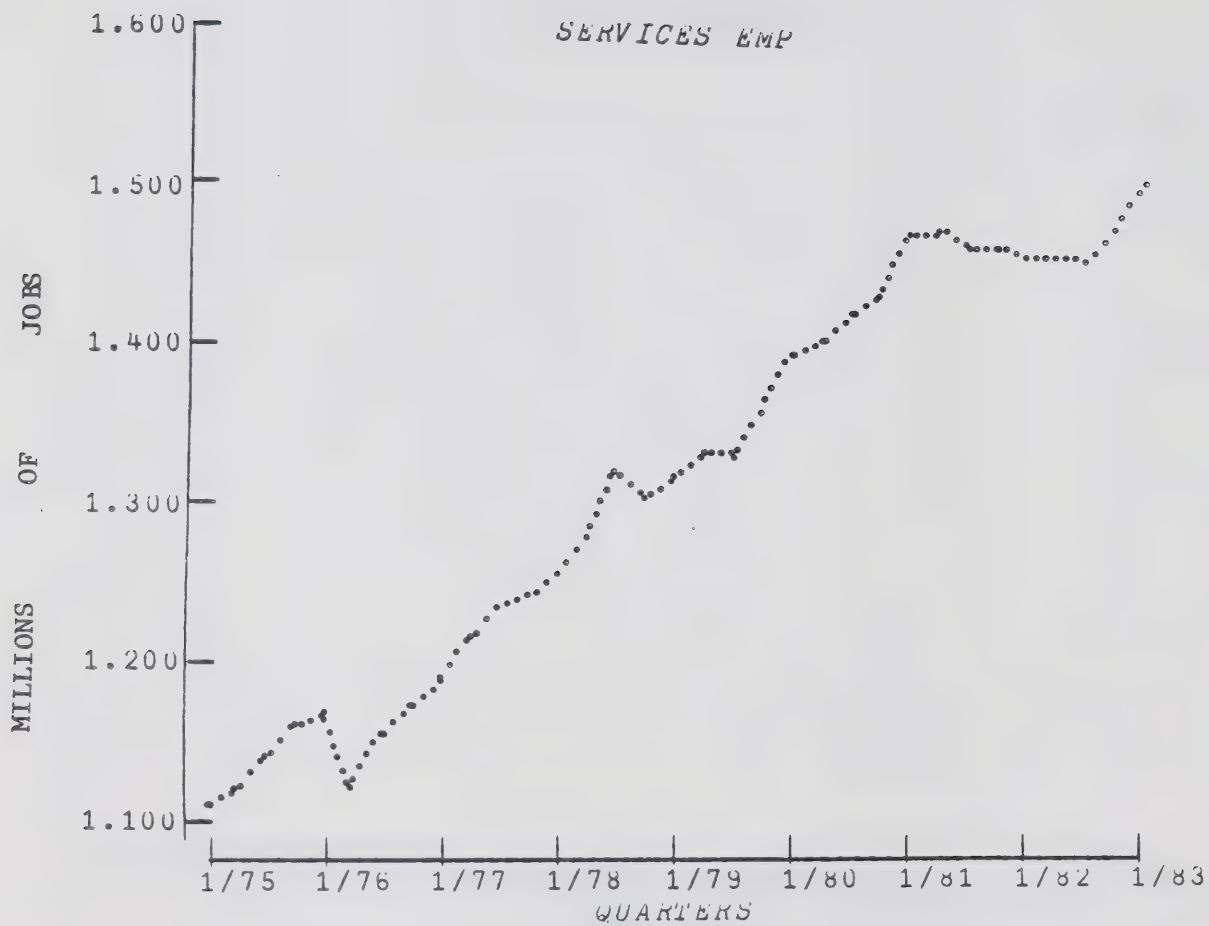
MANAGERIAL EMP



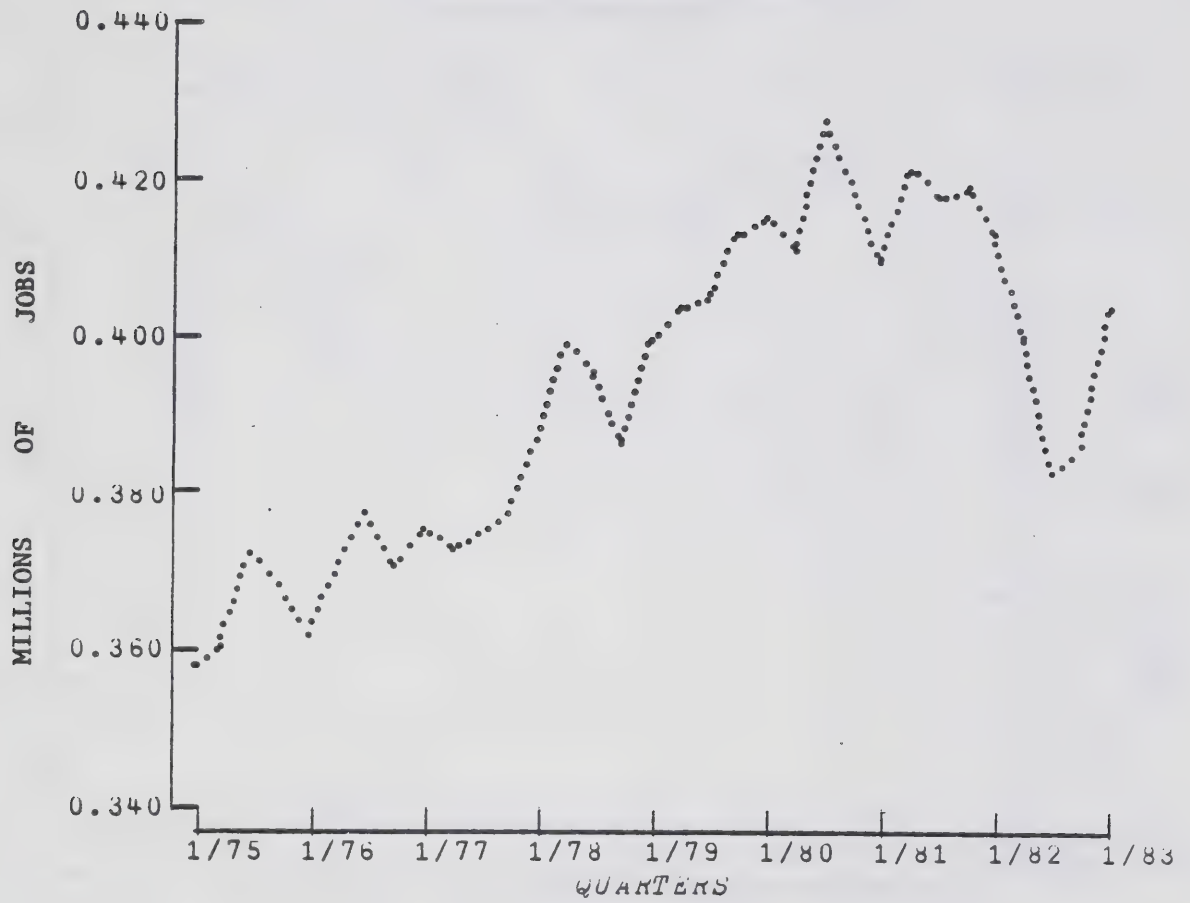


PRIMARY EMP



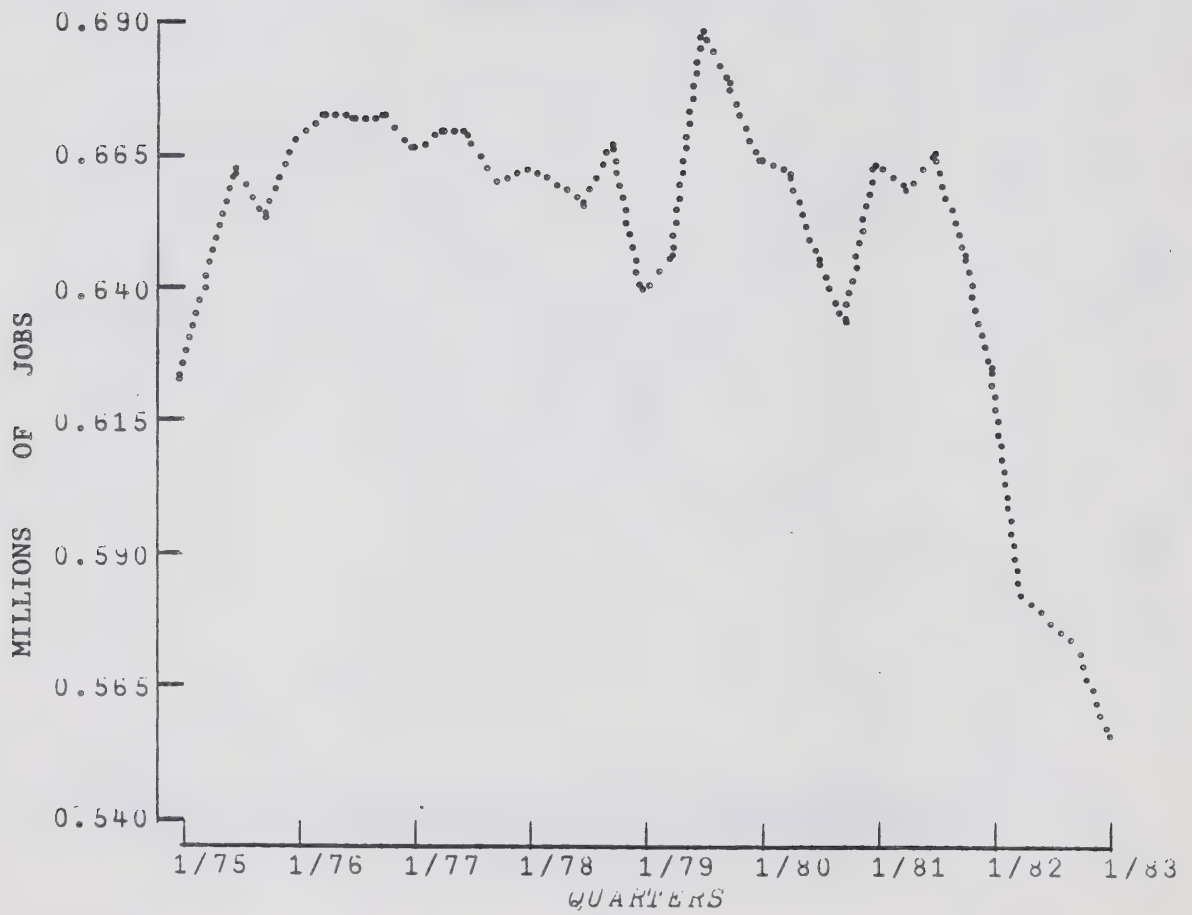


*MATERIALS/CRAFT EMP*

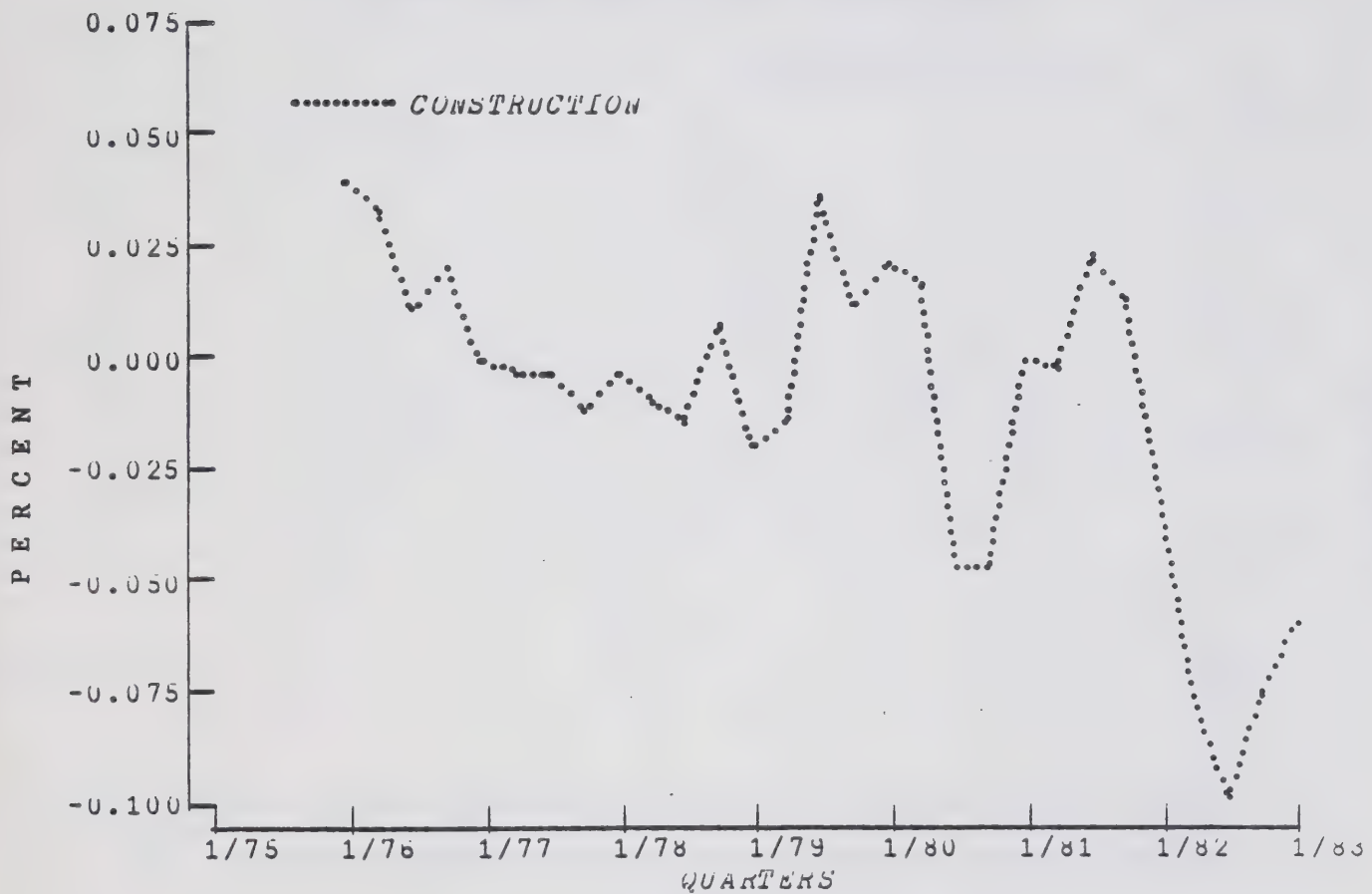




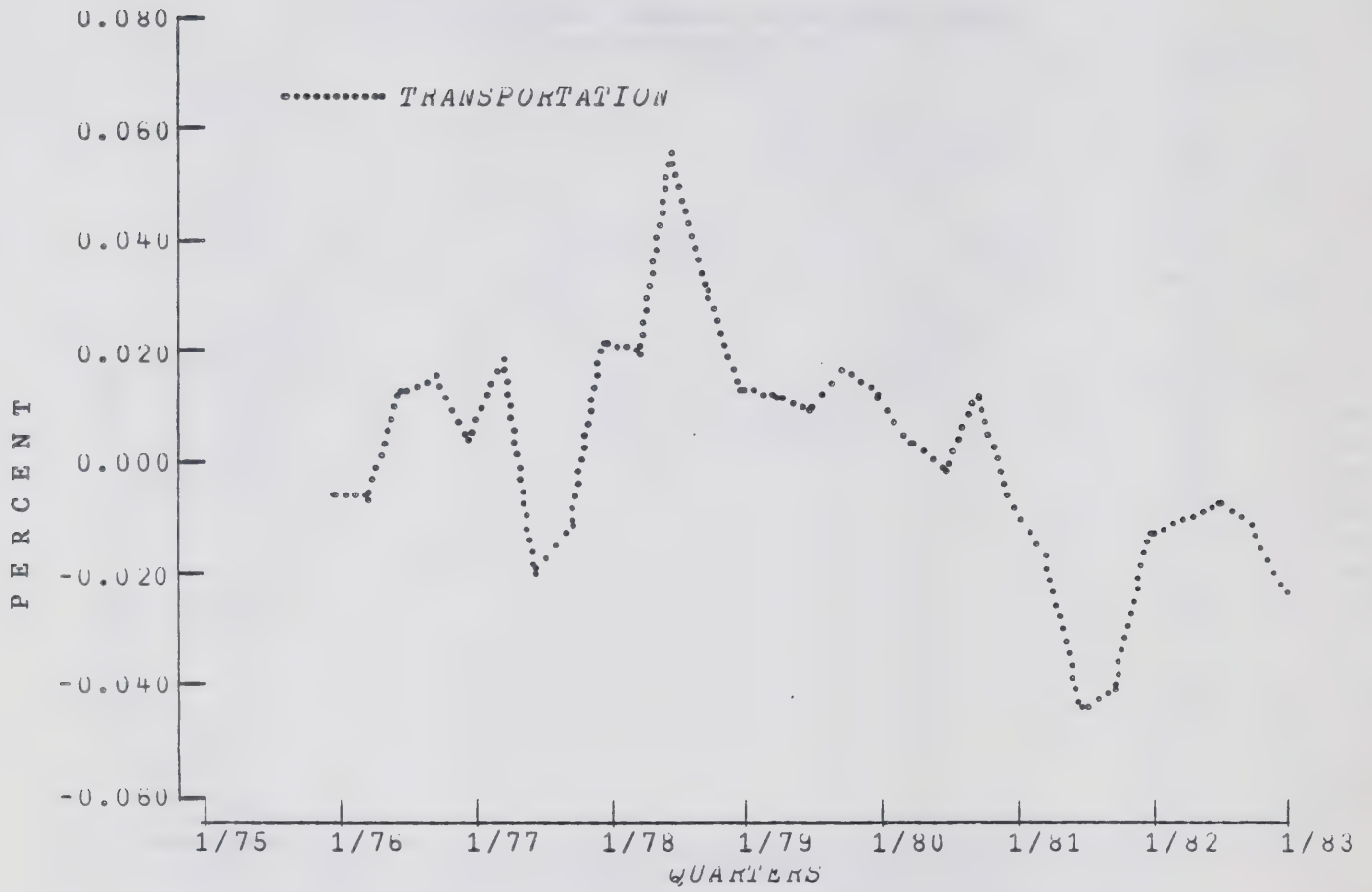
CONSTRUCTION EMP



YEAR OVER YEAR CHANGE IN EMPLOYMENT

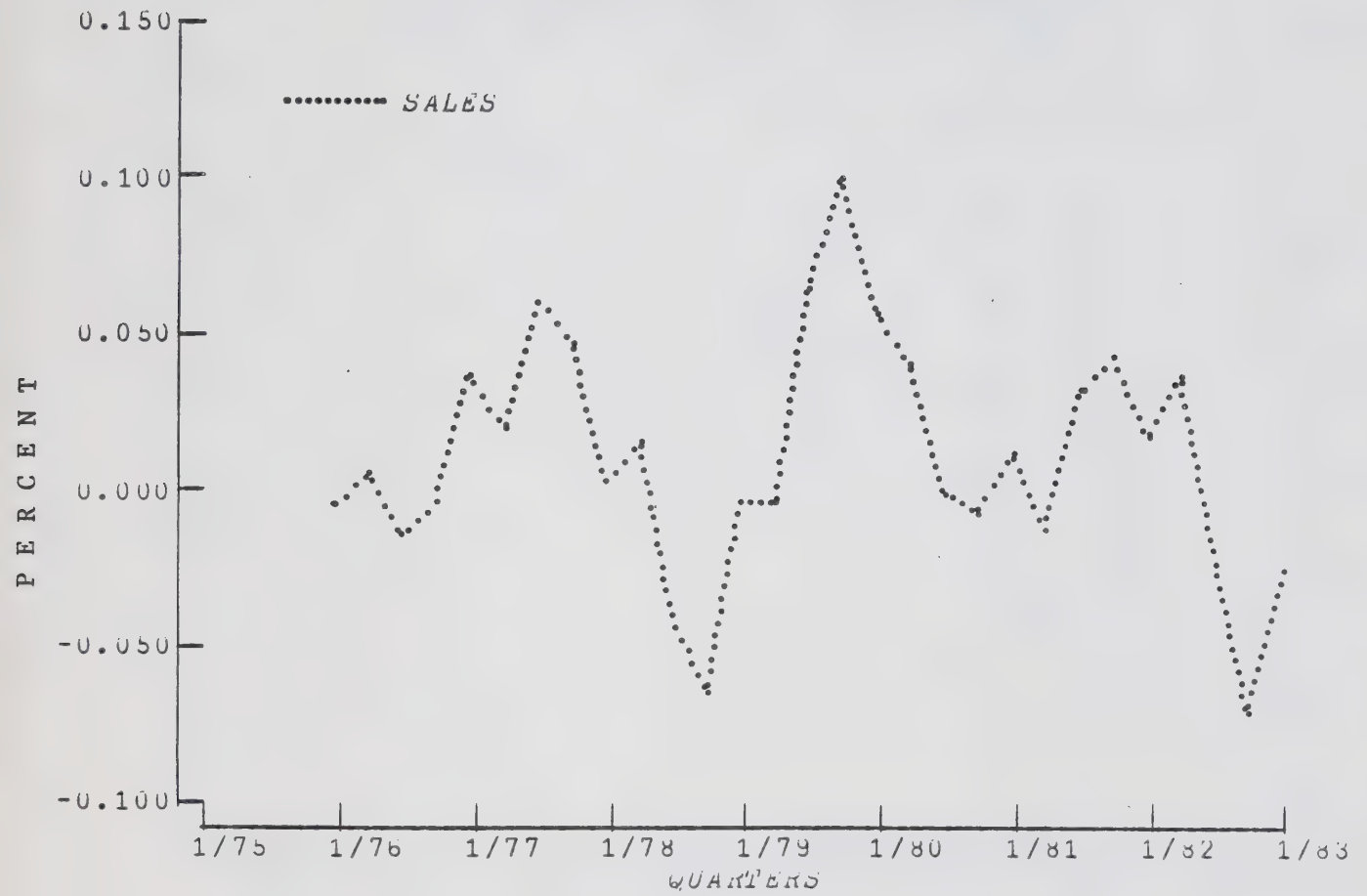


YEAR OVER YEAR CHANGE IN EMPLOYMENT

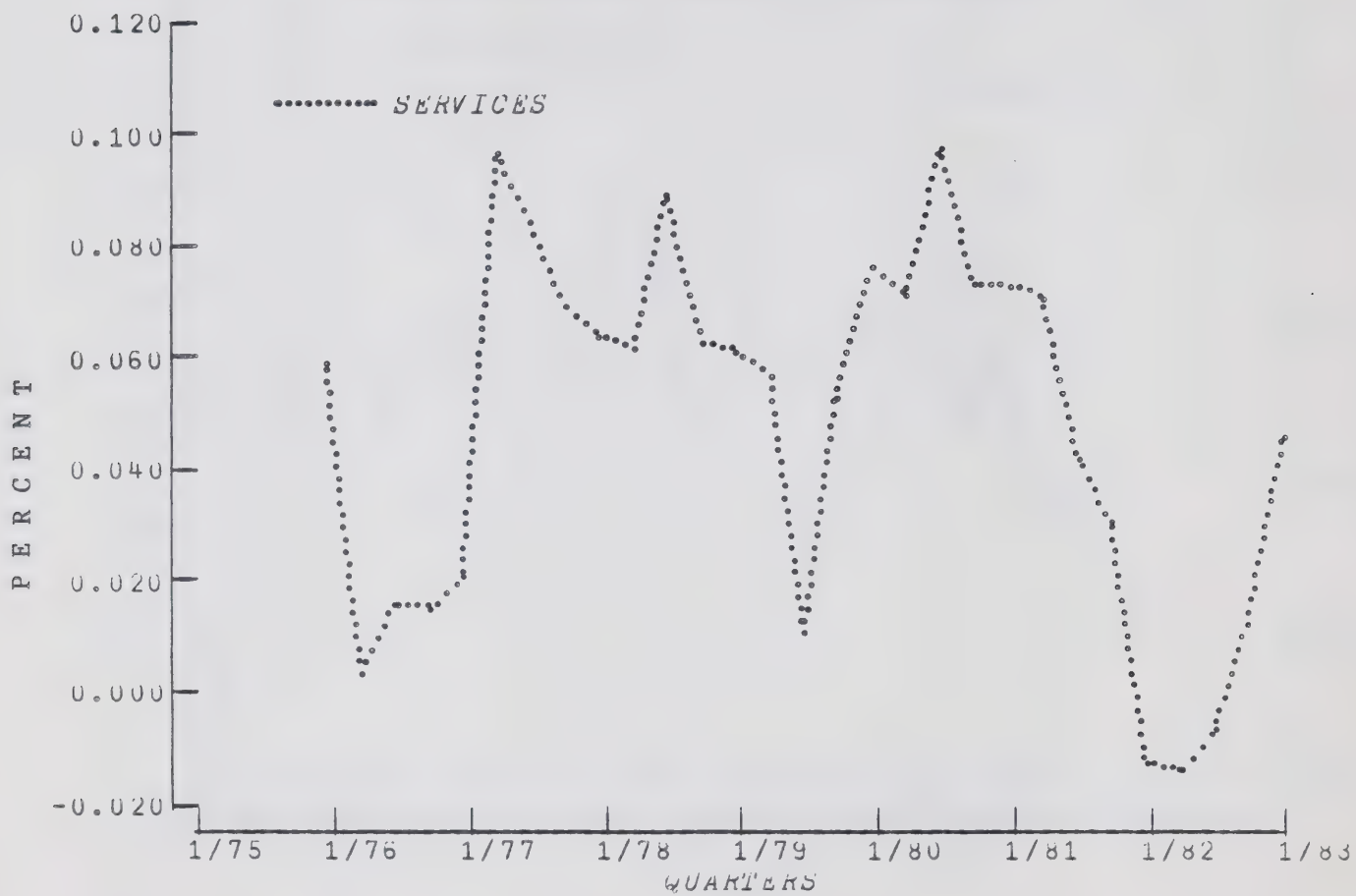




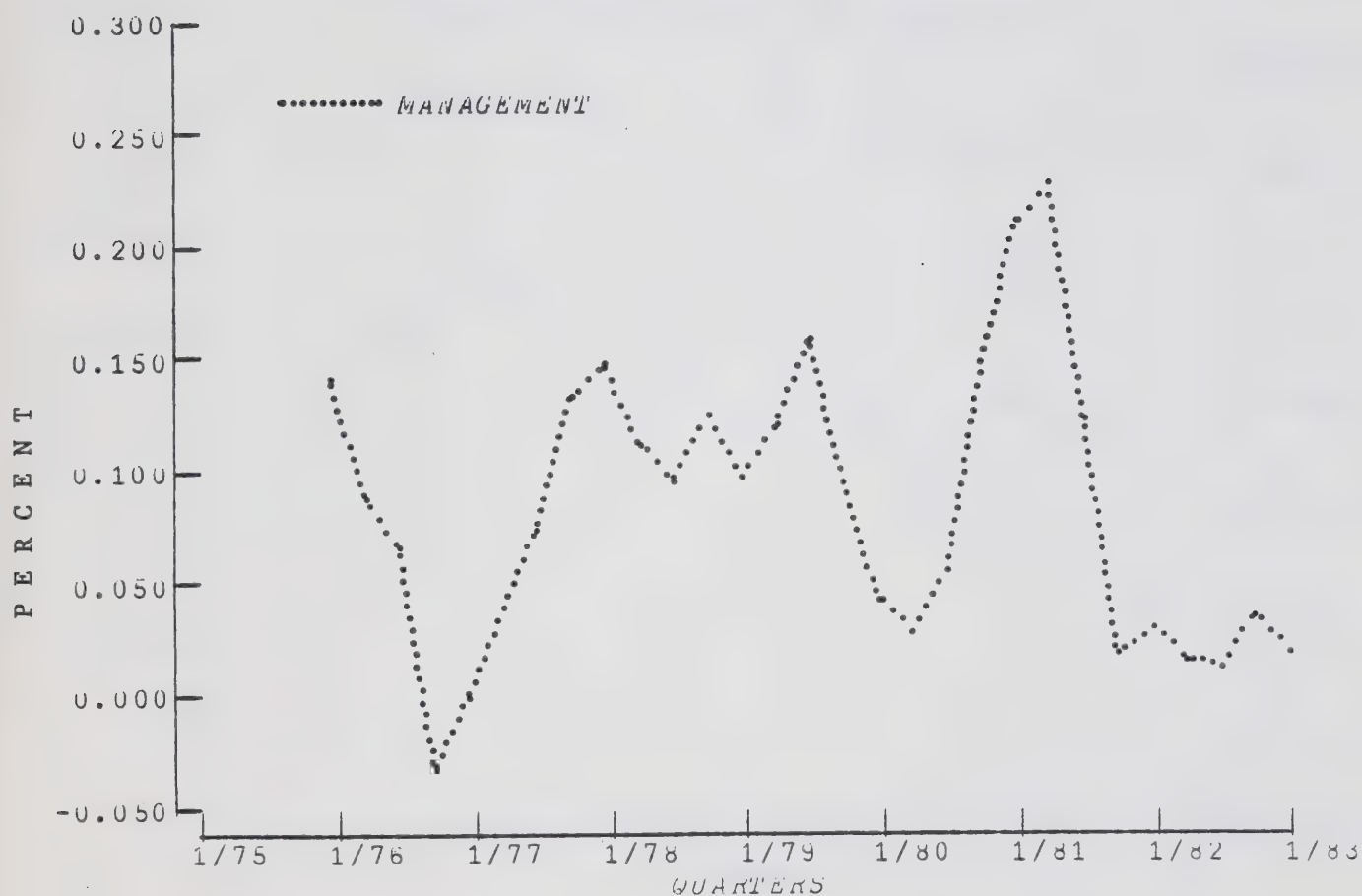
YEAR OVER YEAR CHANGE IN EMPLOYMENT



YEAR OVER YEAR CHANGE IN EMPLOYMENT

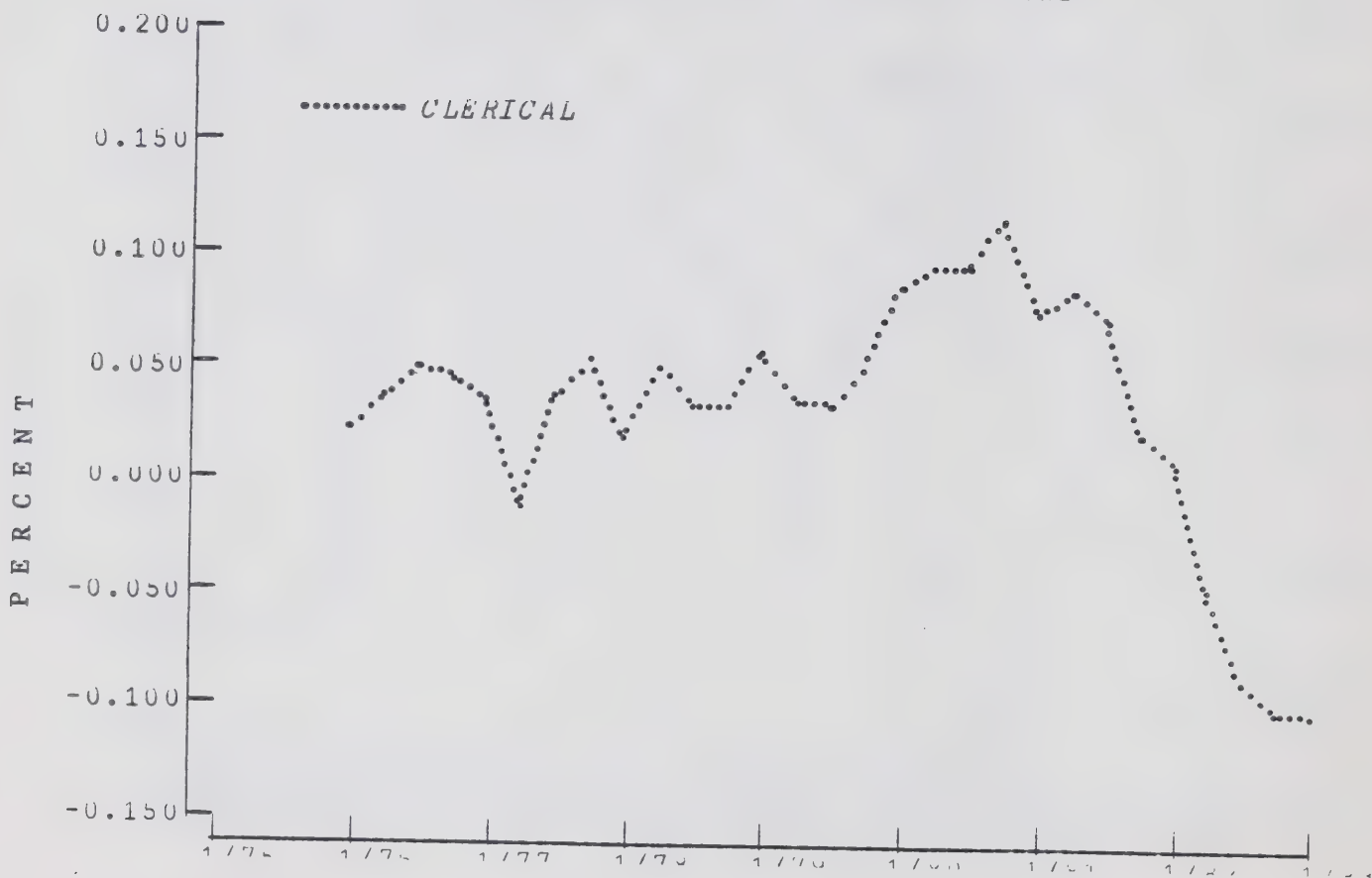


YEAR OVER YEAR CHANGE IN EMPLOYMENT

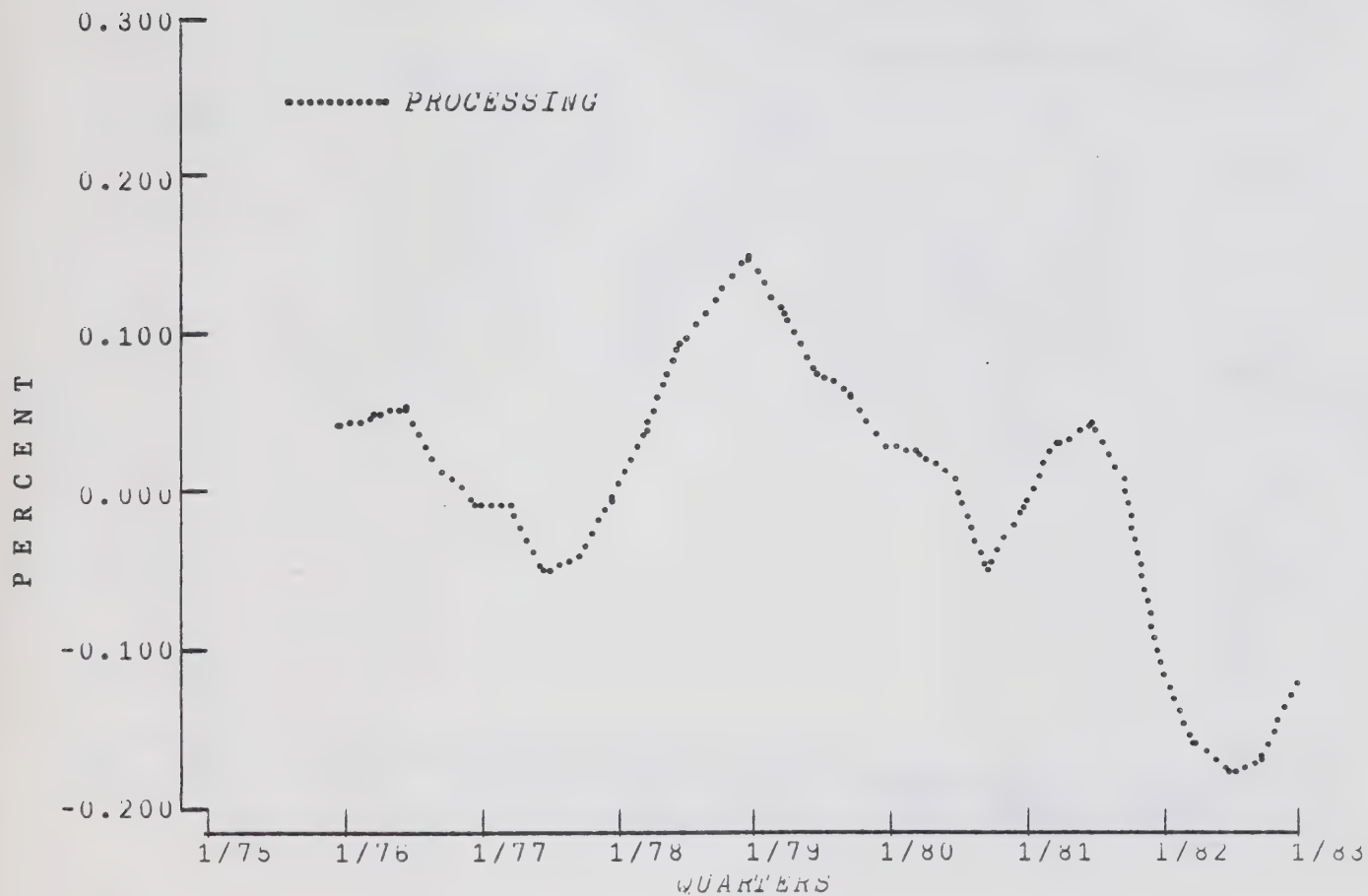




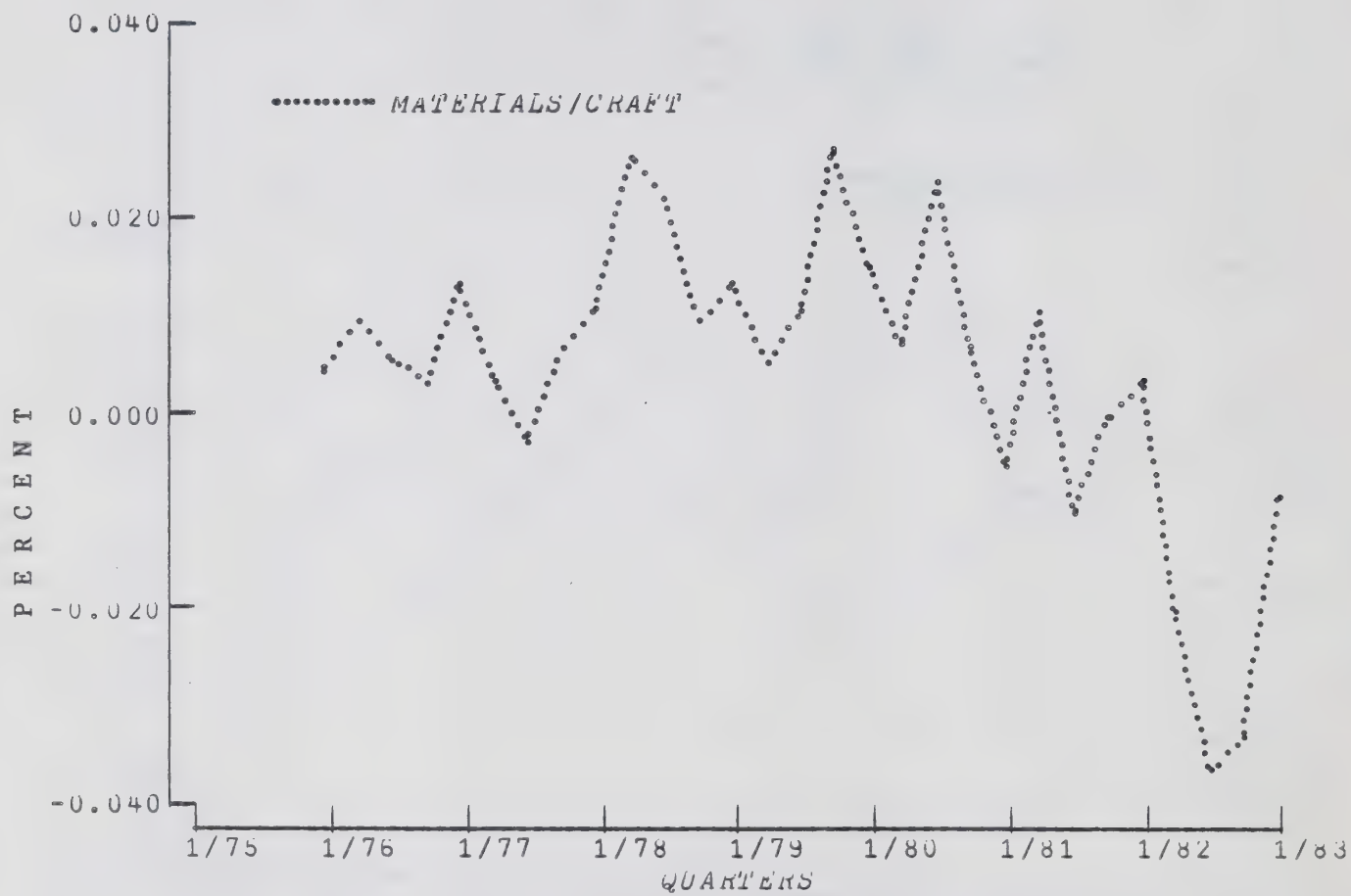
YEAR OVER YEAR CHANGE IN EMPLOYMENT



YEAR OVER YEAR CHANGE IN EMPLOYMENT

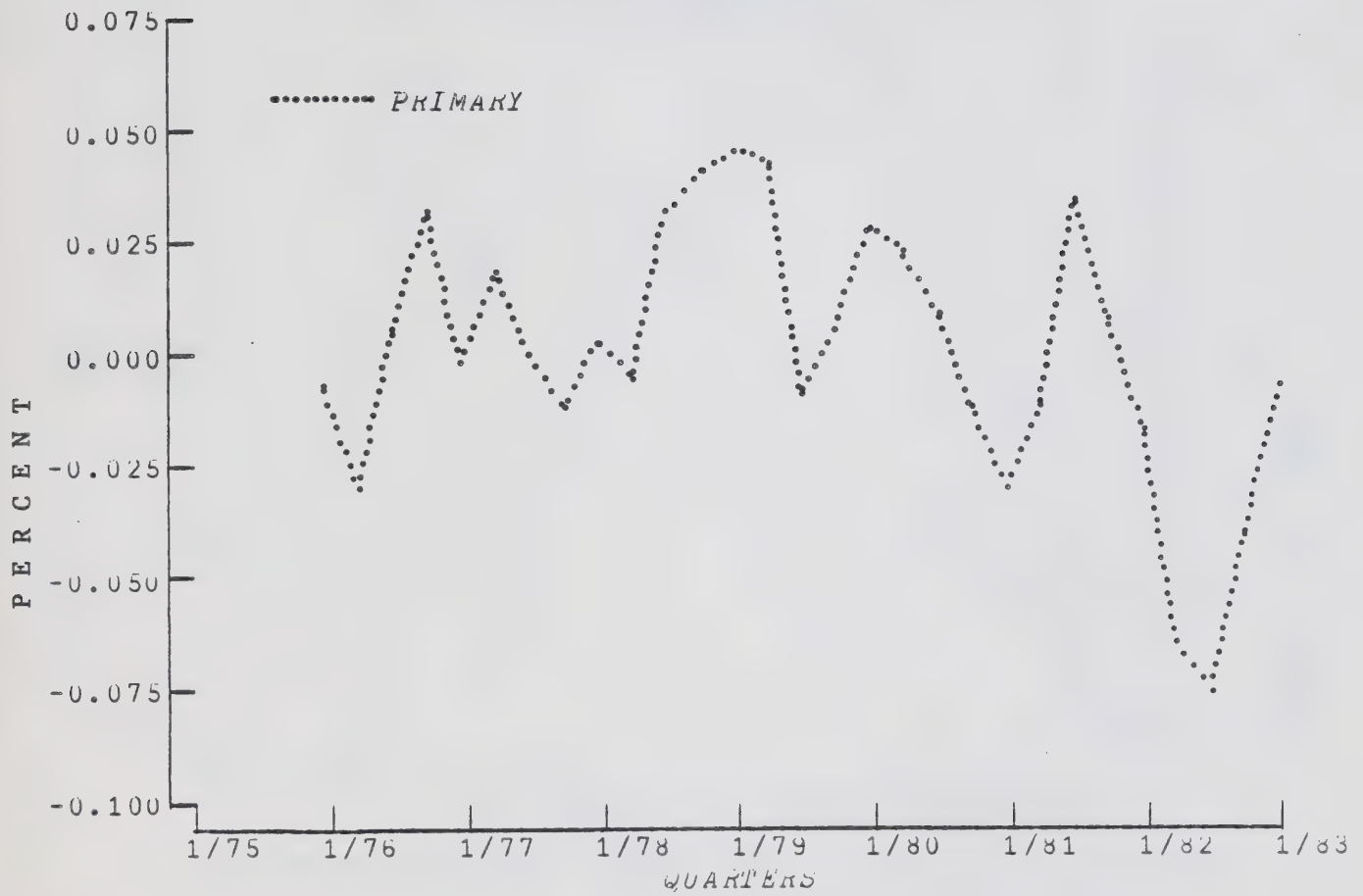


YEAR OVER YEAR CHANGE IN EMPLOYMENT

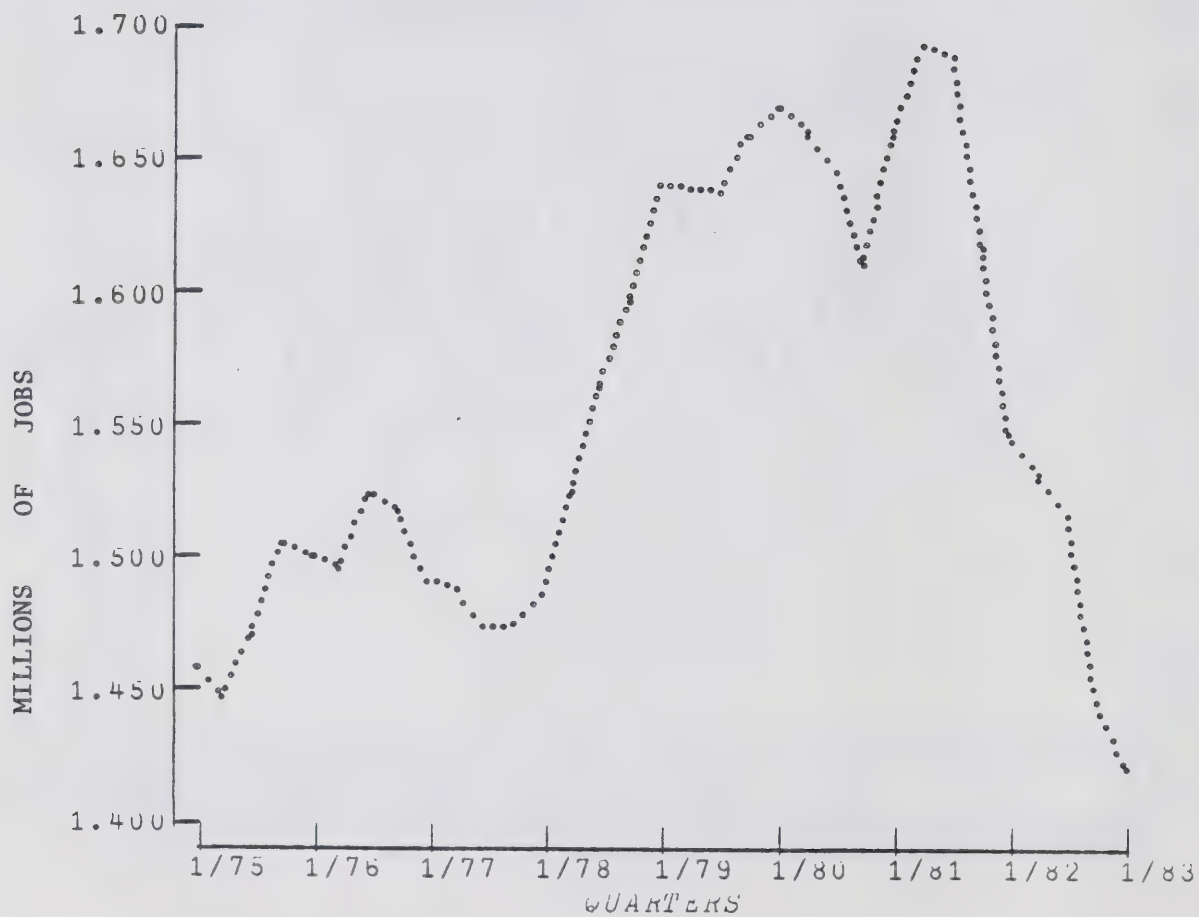




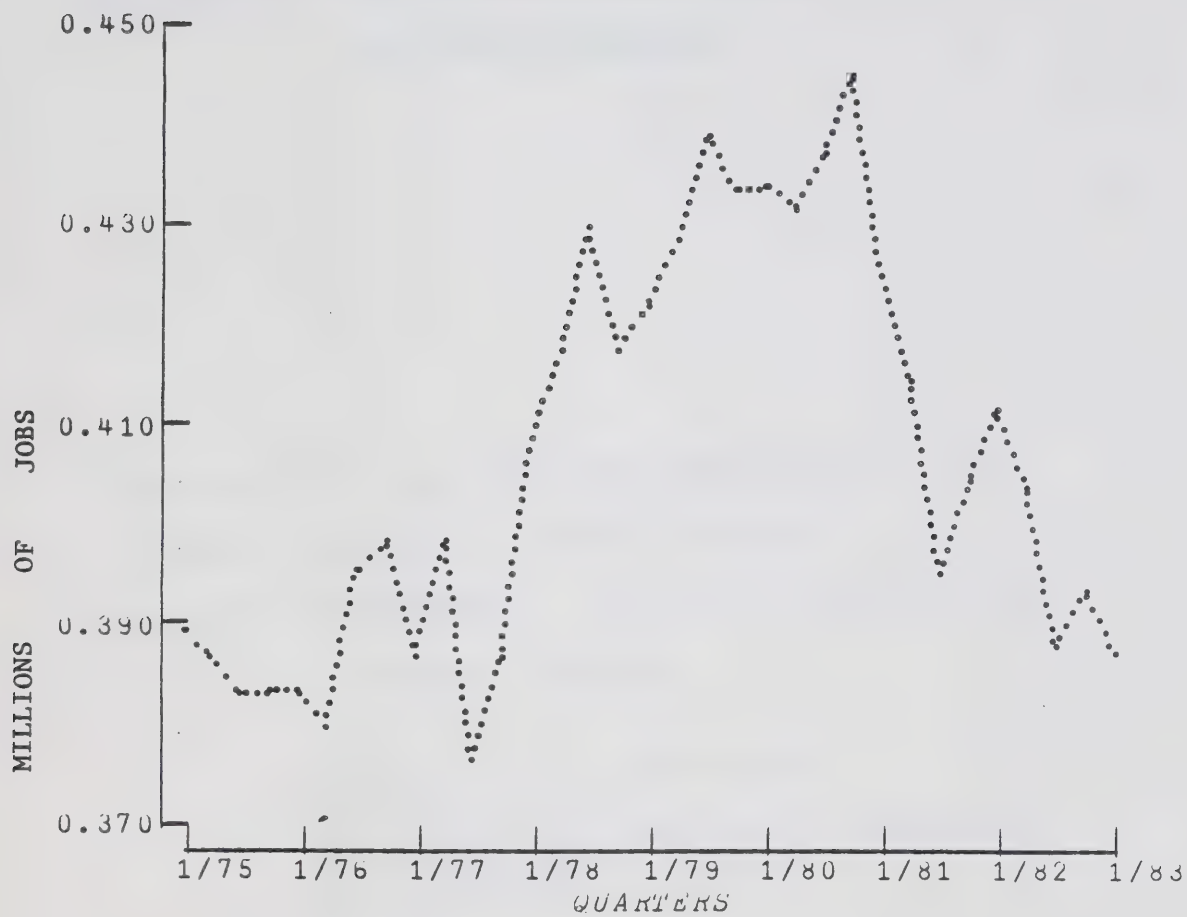
YEAR OVER YEAR CHANGE IN EMPLOYMENT



PROCESSING EMP



TRANSPORTATION EMP







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